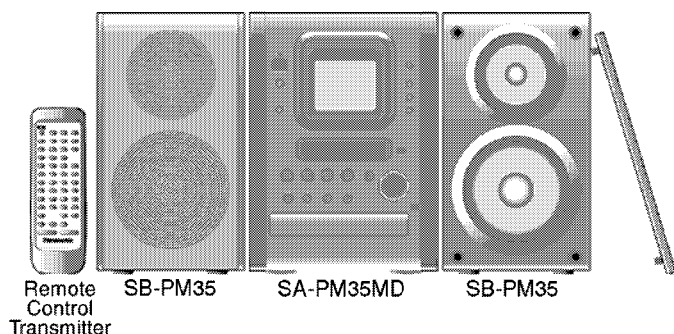


Service Manual

MD Stereo System

COMPACT
disc
DIGITAL AUDIO

Mini
Disc



Remote
Control
Transmitter

SB-PM35

SA-PM35MD

SB-PM35

SA-PM35MD

Colour

(W)... White Type

Area

(GCS)... Singapore

TAPE SECTION

AR2 MECHANISM SERIES

CD SECTION

RAE0155Z-1V TRAVERSE DECK SERIES

MD SECTION

MR3 MECHANISM SERIES

Specification

■ Amplifier Section

RMS power output

THD 10%, both channels driven

HIGH

2 X 3 W (6Ω)

LOW

2 X 15 W (6Ω)

Total BI-AMP power

2 X 18 W

PMPO (Except for United Kingdom)

320 W

Input sensitivity

AUX

480 mV

P-MD

160 mV

Input impedance

AUX

25 kΩ

P-MD

5 kΩ

Output impedance

Headphone

16-32 Ω

■ FM Tuner Section

Frequency range

87.50-108.00 MHz

(0.05 MHz steps)

Sensitivity

1.8 μV (IHF)

S/N 26 dB

1.5 μV

Antenna terminals

75 Ω unbalanced

■ AM Tuner Section

Frequency range

522-1629 kHz (9 kHz steps)

For others

520-1630 kHz (10 kHz steps)

Sensitivity

S/N 20 dB

500 μV/m

■ Cassette Deck Section

Track system

4 track, 2 channel

Heads

Record/playback

Solid permalloy head

Erasers

Double gap ferrite head

Motor

DC servo motor

Recording system

AC bias 100kHz

Erasing system

AC erase 100kHz

Tape speed

4.8 cm/s

Overall frequency response (-6dB at DECK OUT)

NORMAL (TYPE I)

35 Hz - 14 kHz

HIGH (TYPE II)

35 Hz - 14 kHz

S/N ratio

Normal (TYPE I)

50 dB (A weighted)

Wow and flutter

0.18 % (WRMS)

Fast forward and rewind time

Approx. 120 seconds with C-60 cassette tape

■ MD Section

System

Minidisc digital audio system

Recording

Magnetic field modulation direct overwrite

Panasonic®

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Reading	Non-contact optical system with semiconductor laser (Wavelength = 780nm)	D/A converter	MASH (1 bit DAC)
Sampling frequency	44.1 kHz	■ General	
Coding system	ATRAC	Power supply	AC 220-240 V, 50/60 Hz
Number of channels	2 channels stereo	Power consumption	(For others) 67 W
Wow and flutter	Below measurable limit	Standby	0.7 W
■ CD Section		Dimensions (WxHxD)	180x242x287 mm
Sampling frequency	44.1kHz	Mass	4.8 kg
Decoding	16 bit linear	Notes :	
Beam source	Semiconductor laser	1. Specifications are subject to change without notices. Mass and dimensions are approximate.	
Wave length	780 nm	2. Total harmonic distortion is measured by the digital spectrum analyzer.	
Number of channels	2 channels stereo	* US and foreign patents licensed from Dolby Laboratories Licensing Corporation.	
S/N ratio		■ System: SC-PM35MD(GCS)	Music Center: SA-PM35MD(GCS)
SP OUT	70 dB (JIS A)		Speaker: SB-PM35(EG)
Wow and flutter	Below measurable limit		
Digital filter	8 fs		

WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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2 Protection Circuitry	3	10 Illustration of IC's, Transistors and Diodes	23
3 Accessories	3	11 Terminal Function of IC's	24
4 Handling Precautions For Traverse Deck (CD/MD)	4	12 Block Diagram	31
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1 Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C607, C635 and C637 through a 10 Ω , 5W resistor to ground. DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices. After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

- Current consumption at AC 240V, 50 Hz in NO SIGNAL mode should be ~200mA.

2 Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

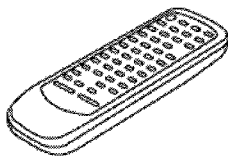
1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

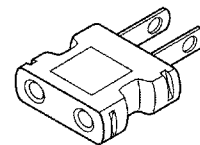
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

3 Accessories

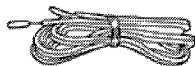
Note : Refer to Packing Materials & Accessories for part number.



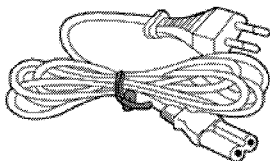
Remote Control
Transmitter



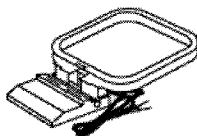
Power plug adaptor



FM indoor antenna



AC mains lead



AM Loop antenna

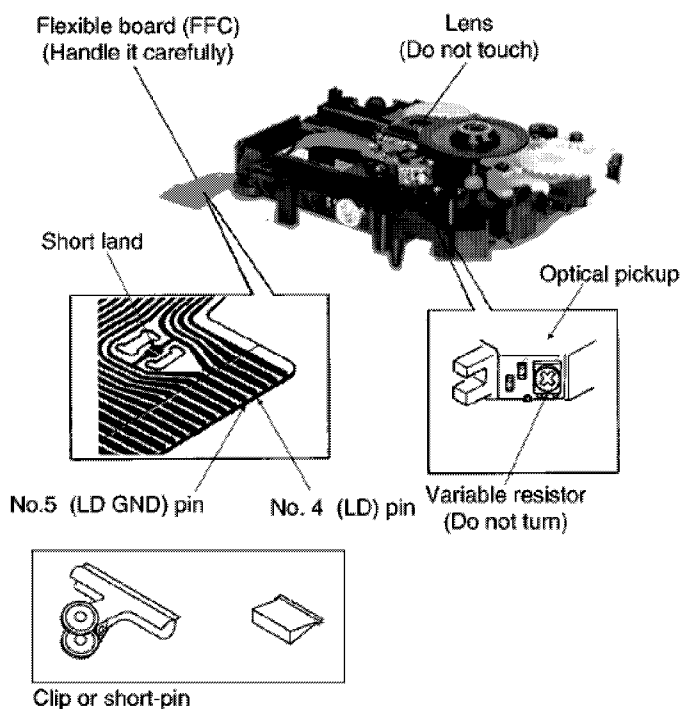
4 Handling Precautions For Traverse Deck (CD/MD)

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.

So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

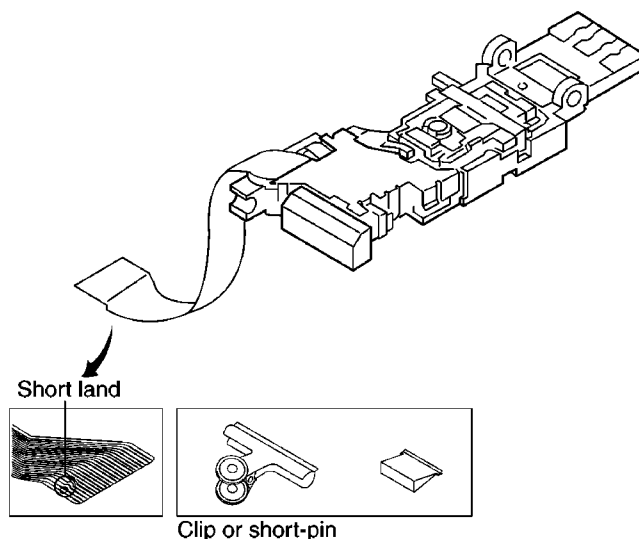
● Handling of CD traverse deck (optical pickup)

1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. The short land between the No.4 (LD) and No.5 (GND) pins on the flexible board (FFC) is shorted with a solder build-up to prevent damage to the laser diode.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.



● Handling of MD Unit (optical pickup)

1. Do not subject the MD unit (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. The short land between the No.25 (LD-GND) and No. 24 (LD) pins on the flexible board is shorted with a solder builder up to prevent damage to the laser diode.
3. Take care not to apply excessive stress to the flexible board (FFC).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted..



● Grounding for electrostatic breakdown prevention

1. Human body grounding

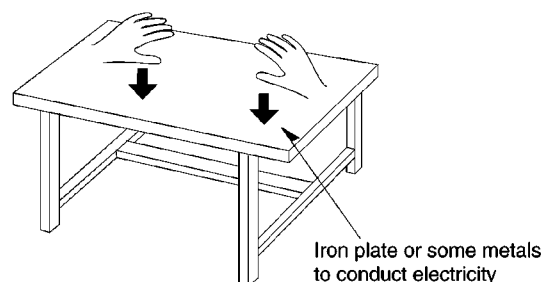
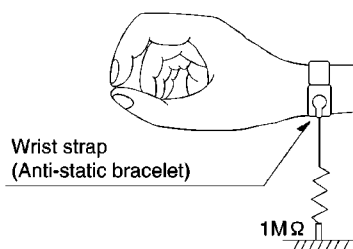
Use the anti-static wrist strap to discharge the static electricity from your body.

2. Work table grounding

Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution :

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).



Caution when Replacing the Optical Pickup :

The traverse has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.

5 Precaution of Laser Diode

Caution :

This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens.

Wavelength : 780 nm

Maximum output radiation power from pick up : 100 mW/VDE

Laser radiation from pick up unit is safety level, but be sure the followings:

1. Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

ACHTUNG :

Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge : 780nm

Maximale Strahlungsleistung der Lasereinheit :100W/VDE

Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.

ADVARSEL :

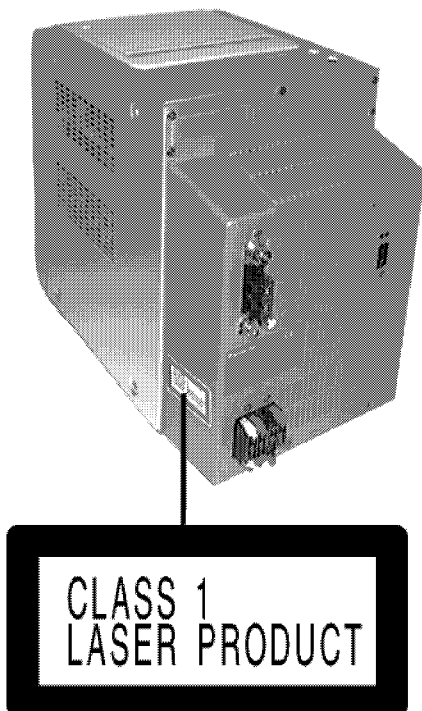
I dette a apparat anvendes laser.

CAUTION!

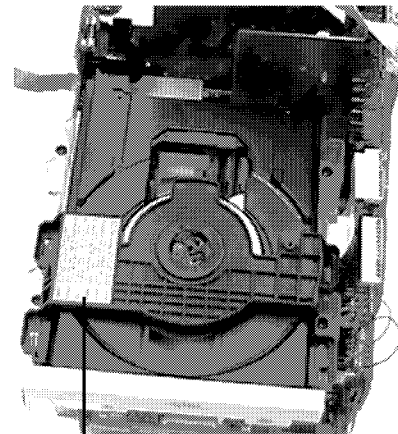
THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ Use of Caution Labels

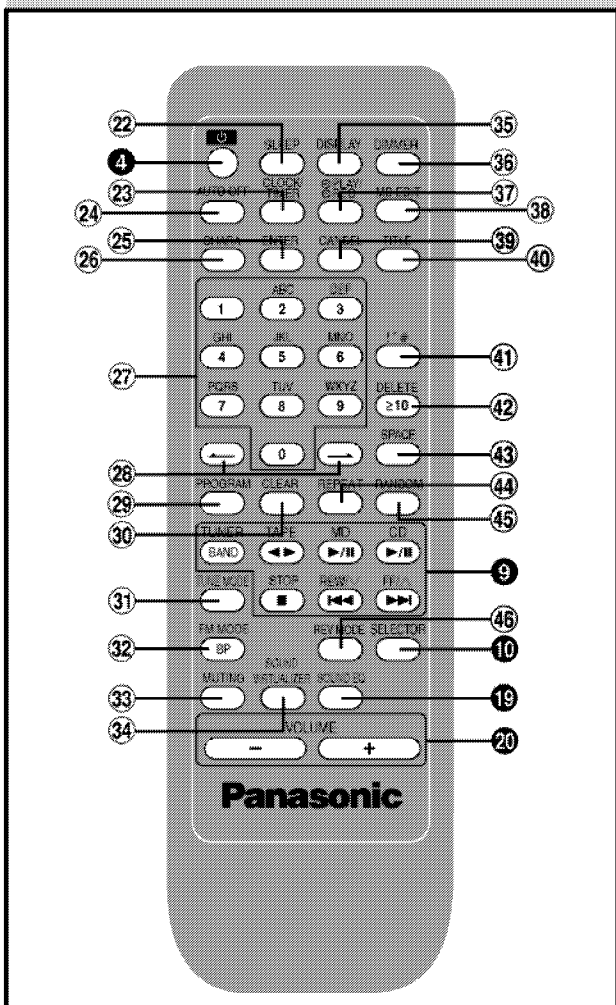
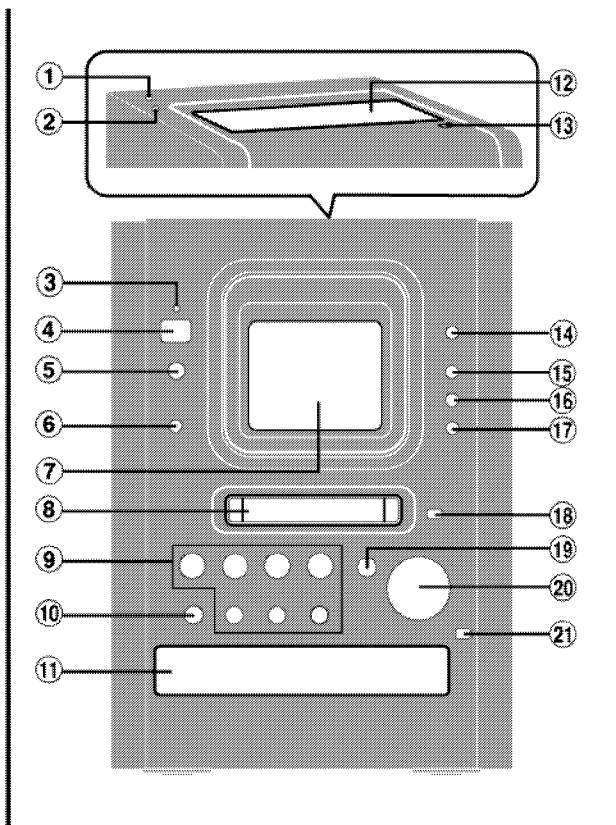


LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT



DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING. NÅR SIKKERHEDSÅPBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSETELSE FOR STRÅLING.
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTIINNA NÄKYMÄTÖNTÄ LASERSÄTELYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	ÖSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLAS BRYTES. UNDGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	UNSIICHTBARE LASERSTRÄHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

6 Operation Procedures



Front panel controls

Main unit

- ① Headphone jack (PHONES)
- ② P-MD terminal (P-MD)
- ③ AC supply indicator (AC IN)
This indicator lights when the unit is connected to the AC mains supply.
- ④ For United Kingdom
Standby/on switch (⏻/⏻)
Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.
For others
Standby/on switch (POWER ⏻/⏻)
Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.
- ⑤ Remote control signal sensor
- ⑥ Display select/demonstration button (DISPLAY, -DEMO)
- ⑦ Display
- ⑧ MD slot
- ⑨ Main operating buttons
- ⑩ Function select button (SELECTOR)
- ⑪ CD tray
- ⑫ Cassette holder
- ⑬ Cassette holder open button (⏻, OPEN)
- ⑭ MD/CD recording mode select, SP/LP mode select button (EDIT MODE, -SP/LP)
- ⑮ MD&TAPE record button (● MD&TAPE REC)
- ⑯ Tape record/pause button (● TAPE REC/II)
- ⑰ MD record/pause button (● MD REC/II)
- ⑱ MD eject button (⏻, EJECT)
- ⑲ Sound equalizer button (SOUND EQ)
- ⑳ Volume control (VOLUME)
- ㉑ CD tray open/close button (⏻ OPEN/CLOSE)

Remote control

Buttons such as ① function in the same way as the controls on the main unit.

- ㉒ Sleep button (SLEEP)
- ㉓ Clock/timer button (CLOCK/TIMER)
- ㉔ Auto power-off button (AUTO OFF)
- ㉕ Enter button (ENTER)
- ㉖ Character select button (CHARA)
- ㉗ Numbered, character buttons (1-9, 0, A-Z)
- ㉘ Cursor buttons (←, →)
- ㉙ Program button (PROGRAM)
- ㉚ Program clear button (CLEAR)
- ㉛ Tuning mode select button (TUNE MODE)
- ㉜ FM mode/BP select button (FM MODE, BP)
- ㉝ Muting button (MUTING)
- ㉞ Sound virtualizer button (SOUND VIRTUALIZER)
- ㉟ Display select button (DISPLAY)
- ㊱ Dimmer button (DIMMER)
- ㊲ Play/record timer button (⏻PLAY/⏻REC)
- ㊳ MD edit button (MD EDIT)
- ㊴ MD edit cancel button (CANCEL)
- ㊵ Title edit button (TITLE)
- ㊶ Symbol button (I" #)
- ㊷ Delete, ten and over button (≥10, DELETE)
- ㊸ Space button (SPACE)
- ㊹ Repeat button (REPEAT)
- ㊺ Random button (RANDOM)
- ㊻ Reverse mode select button (REV MODE)

7 Operation Check and Main Component Replacement Procedures

“ATTENTION SERVICER”

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
4. Refer the Parts No. on the page of "Main Component Replacement Procedures", if necessary.

Contents

- Checking Procedure for each major P.C.B.
 - Checking of the Deck P.C.B.
 - Checking for the Transformer P.C.B.
 - Checking for the Main P.C.B.
 - Checking for the CD Servo P.C.B.
 - Checking for the MD Servo P.C.B.
 - Checking for the Power P.C.B.
- Disassembly and Assembly of the Disc Tray and CD Traverse Unit
 - Disassembly of the Disc Tray
 - Disassembly of the CD Traverse Unit
- Main Component Replacement Procedure
 - Replacement of the CD Servo P.C.B. and Optical Pick-up Unit
 - Removal of the Deck P.C.B. and Mechanism P.C.B. for replacing parts
 - Replacement for the Magnetic Head and Optical Pick-up
 - Replacement for the Belt and Loading Motor Assembly
 - Replacement for the Traverse Motor Assembly

Warning :-

This product uses a laser diode. Refer to caution statement Precaution of Laser Diode.

ACHTUNG :-

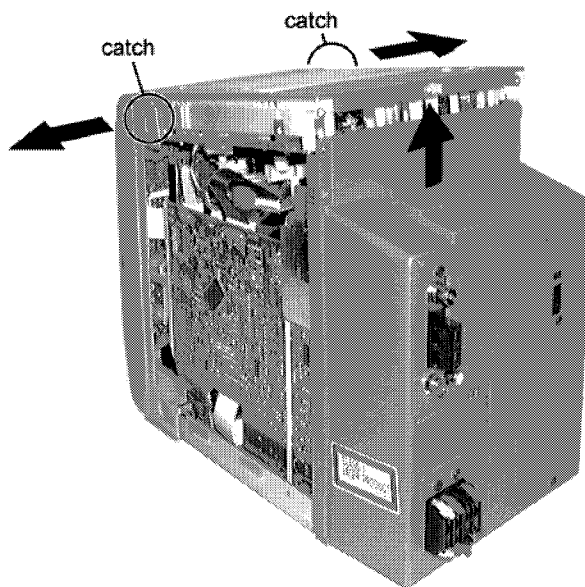
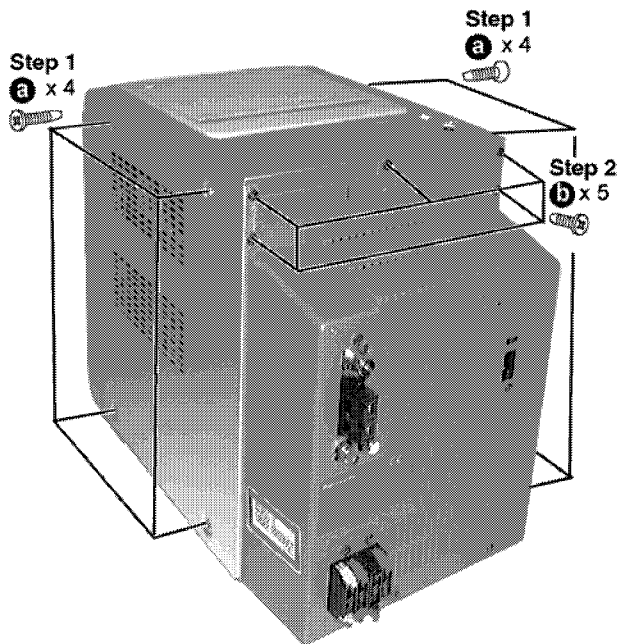
- Die Lasereinheit nicht zerlegen.
- Die Lasereinheit darf nur gegen eine vom Hersteller spezifizierte Einheit ausgetauscht werden.

7.1. Checking Procedure for Each Major P.C.B.

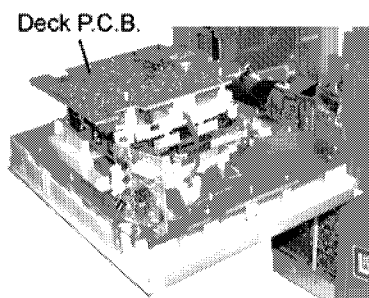
7.1.1. Checking for the Deck P.C.B.

Step 1 Remove 4 screws each side.

Step 2 Remove 5 screws.

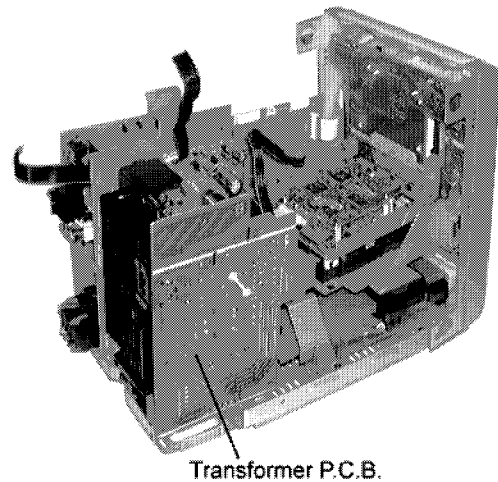
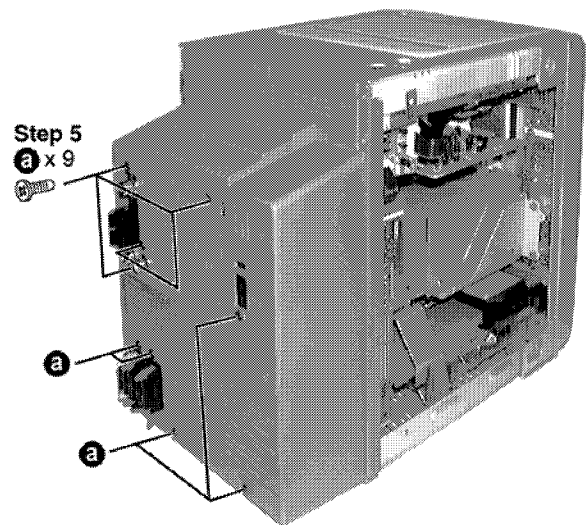


Step 3 Lift up the deck unit and push catches each side.



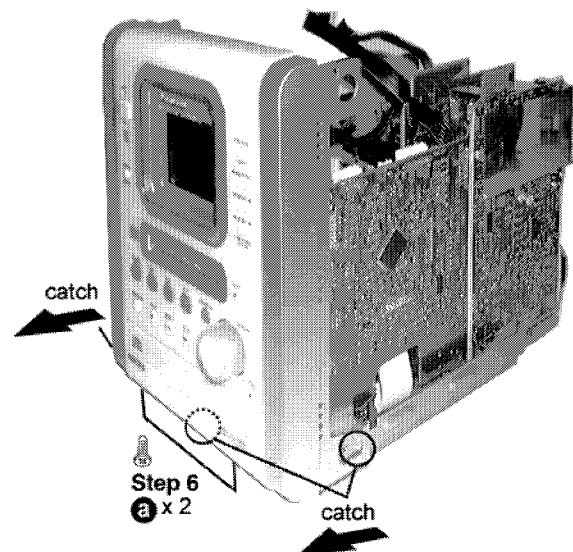
• Check the Deck P.C.B. as shown.

7.1.2. Checking for the Transformer P.C.B.

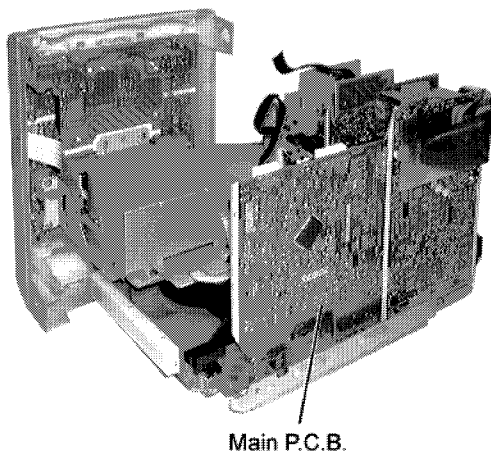


• Check the Transformer P.C.B. as shown.

7.1.3. Checking for the Main P.C.B.

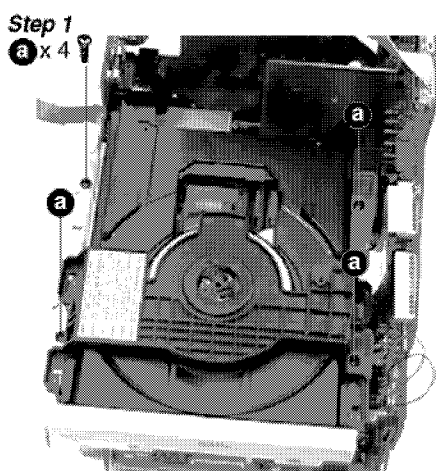


Step 6 Remove 2 screws below, push catches each side.

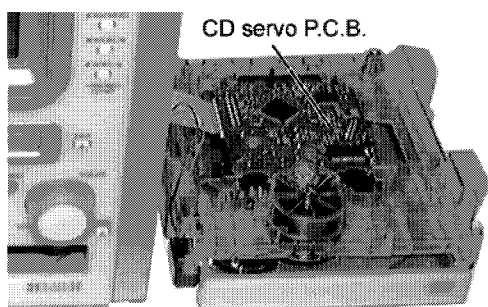


- Check the Main P.C.B. as shown.

7.1.4. Checking for the CD Servo P.C.B.

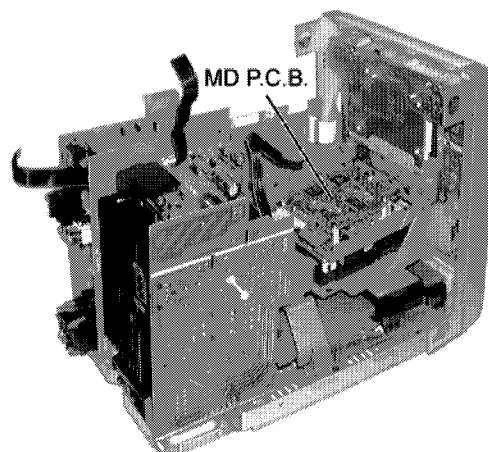


Step 2 Lift up the CD unit and place it as shown in the following figure.

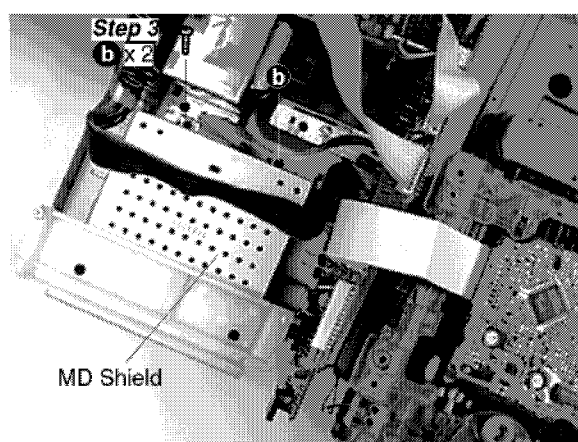


- Check the CD Servo P.C.B. as shown.

7.1.5. Checking for the MD Servo P.C.B.



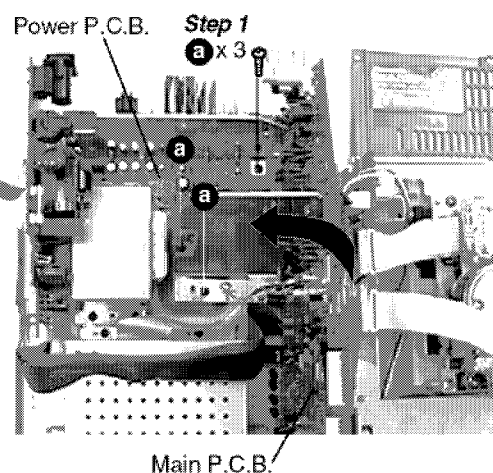
Step 2 Remove the CD fixture (B).



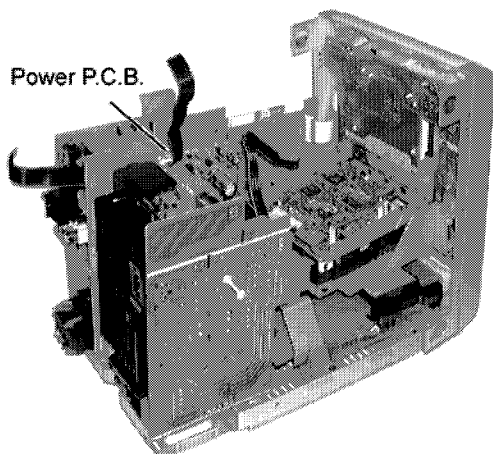
Step 4 Remove the MD shield and place the MD Servo unit as shown in the following figure.

- Check the MD Servo P.C.B. as shown.
- When checking the IC1 on the MD Servo P.C.B., it can be measured with test point on the MD Servo P.C.B.

7.1.6. Checking for the Power P.C.B.



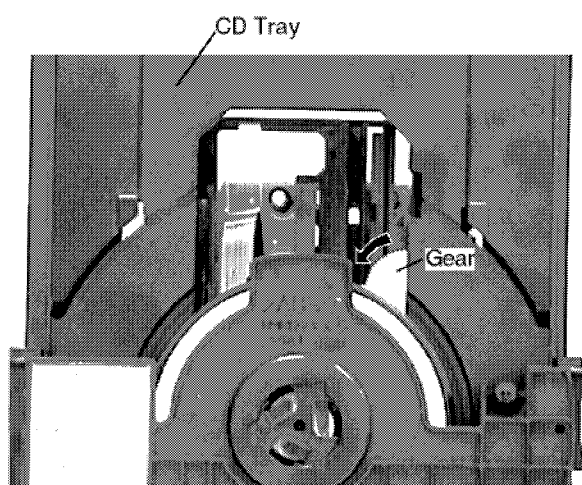
Step 2 Lift up the Main P.C.B. together with the Power P.C.B. and rotate left then place the P.C.B. as shown in the following figure.



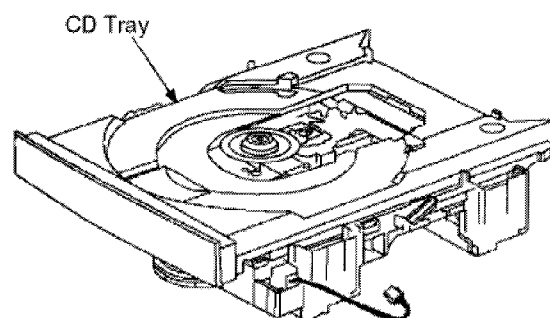
- Check the Power P.C.B. as shown.

7.2. Disassembly and Assembly of the Disc Tray and CD Traverse Unit

7.2.1. Disassembly of the Disc Tray.

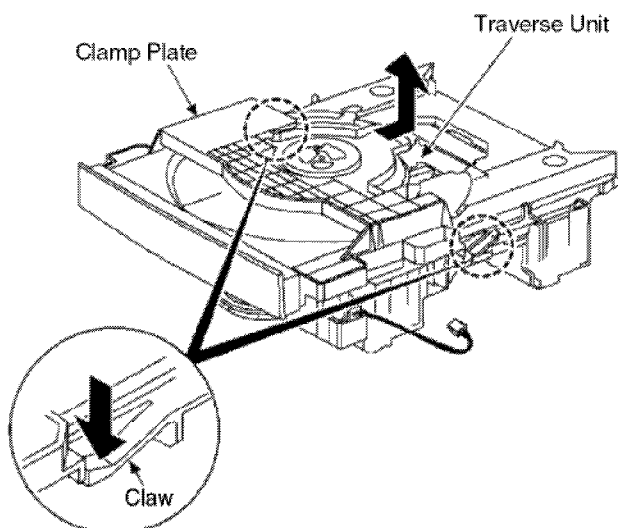


Step 1 Turn the gear counter clock wise until the CD Tray starts to move out.

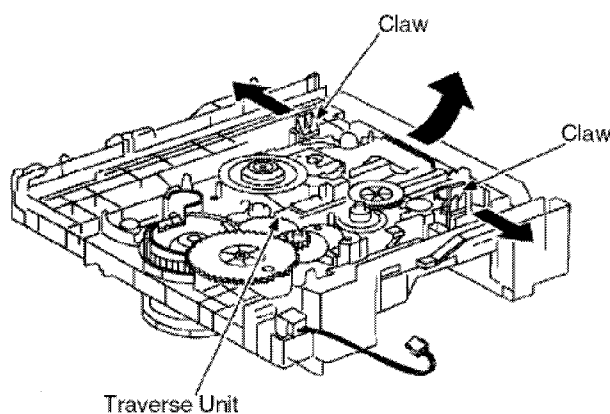


Step 3 Lift up the CD Tray to remove it.

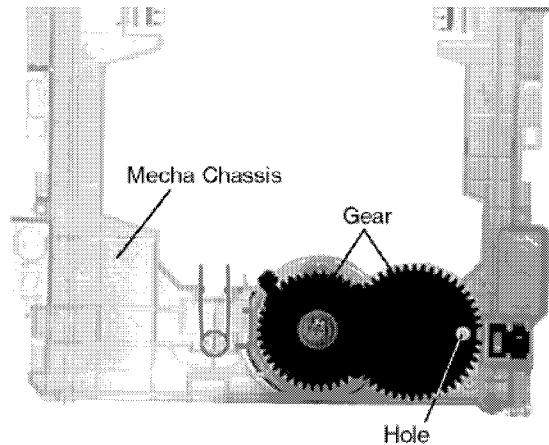
7.2.2. Disassembly of the CD Traverse Unit.



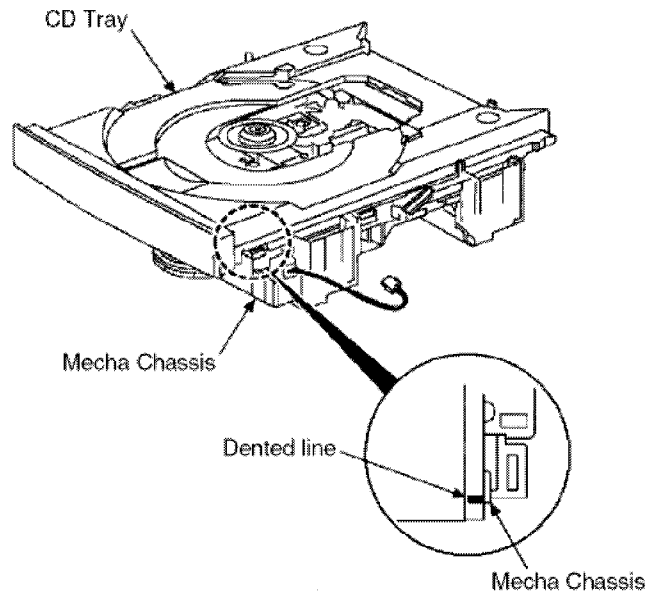
Step 2 Release the 2 claws and remove the clamp plate in the direction of the arrow.



Step 1 Release the 2 claws and remove the CD Traverse Unit in the direction of the arrow.

**NOTE :**

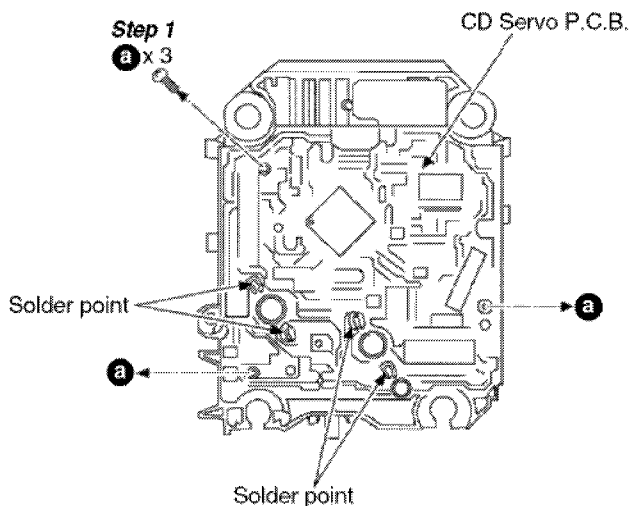
1. Follow the reverse procedure to replace the CD Traverse Unit and CD Tray.
2. Make sure that the 2 gear is in position shown above and the hole on the right gear is align with the hole below it when replacing the CD Traverse Unit and CD Tray.



NOTE : When replacing the CD Tray, make sure the Dented line is at the position as shown.

7.3. Main Component Replacement Procedure

7.3.1. Replacement of the CD Servo P.C.B. and Optical Pick-up Unit.

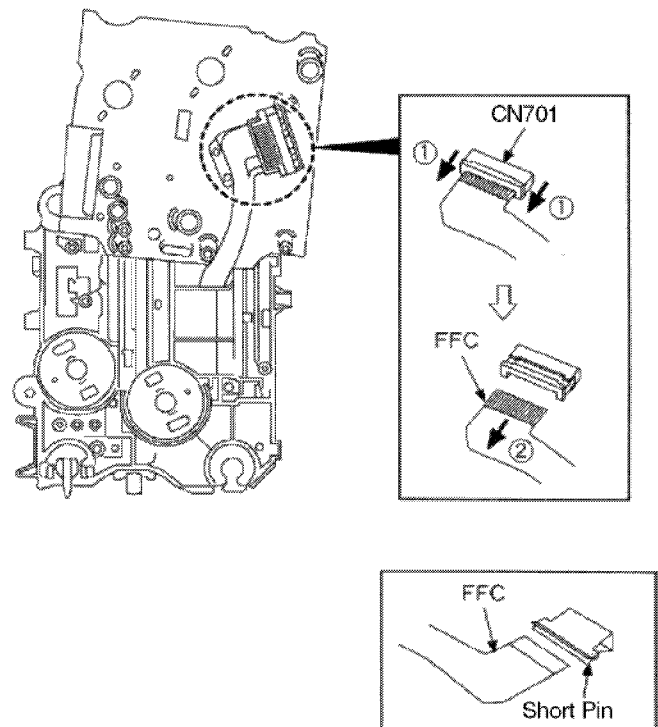


Step 2 Desolder the 4 legs of 2 motors and flip over the CD Servo P.C.B.

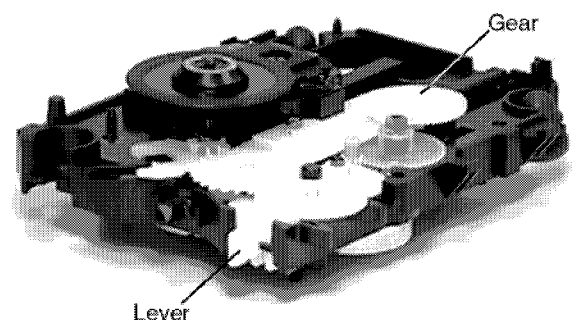
Step 3 Remove the flexible cable at CN701.

- Removal of the flexible cable

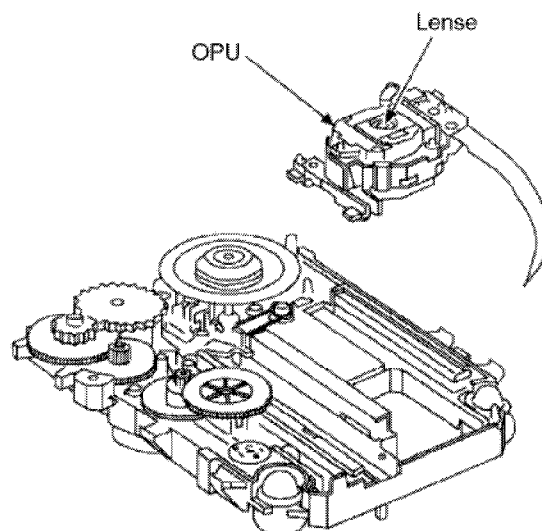
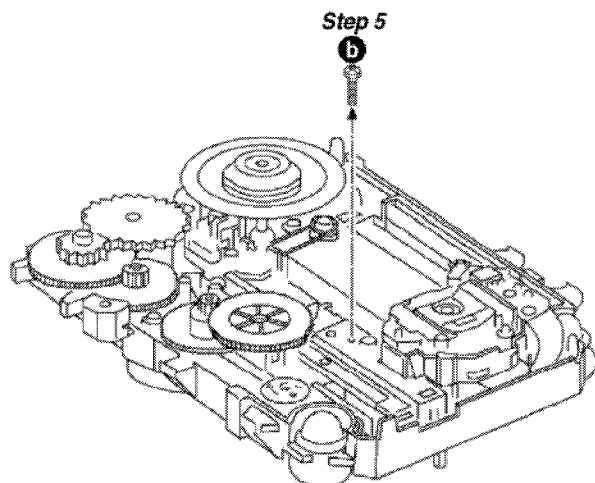
Push the top of the connector in the direction of the arrow 1 and then pull out the flexible cable in the direction of the arrow 2.



NOTE : Insert a short pin into the flexible cable.

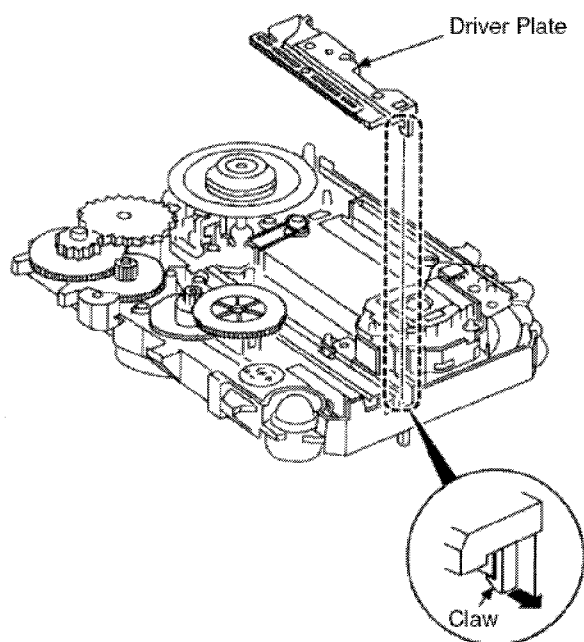


Step 4 Push the lever in and turn the gear clock wise fully.

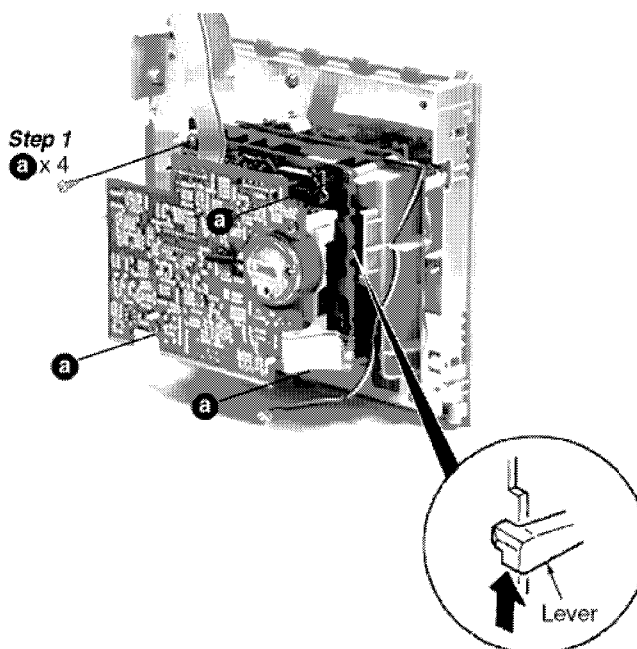


NOTE : Do not touch the Lense on the OPU.

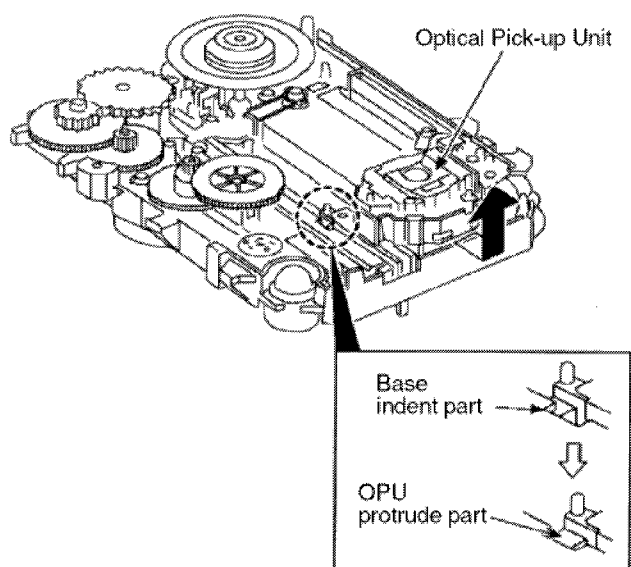
7.3.2. Removal of the Deck P.C.B. and Mechanism P.C.B. for replacing parts.



Step 6 Release the claw and remove the Driver Plate.

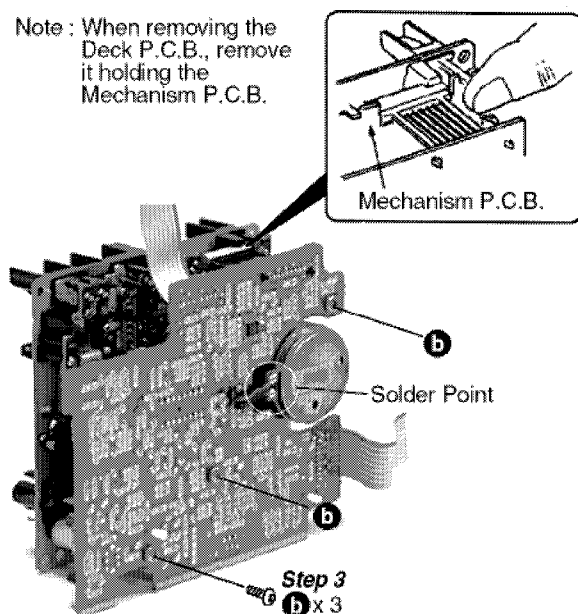


Step 2 Push the lever upward to open the cassette lid and remove the deck unit.



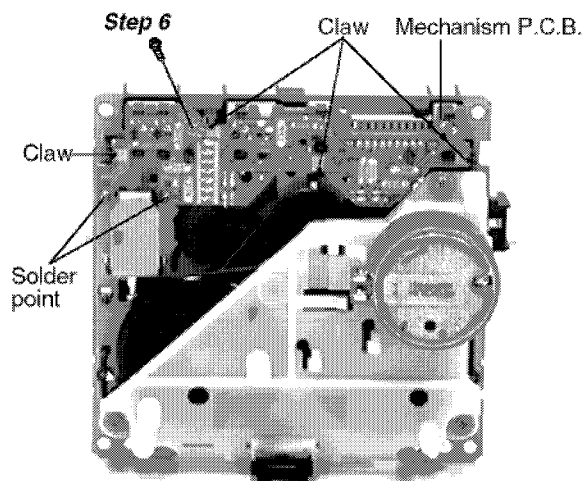
Step 7 Slide out the Optical Pick-up Unit from the indent opening.

Note : When removing the Deck P.C.B., remove it holding the Mechanism P.C.B.



Step 4 Desolder the motor wires.

Step 5 Remove the Deck P.C.B.

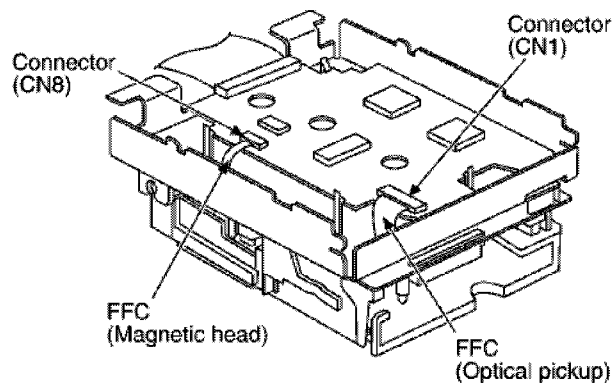


Step 7 Desolder the plunger terminals.

Step 8 Release the 4 claws and remove the Mechanism P.C.B.

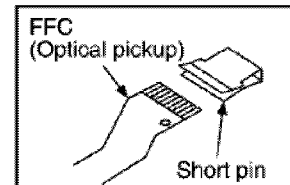
7.3.3. Replacement for the Magnetic Head and Optical Pick-up.

Step 1 Remove the 2 FFCs from the connector.



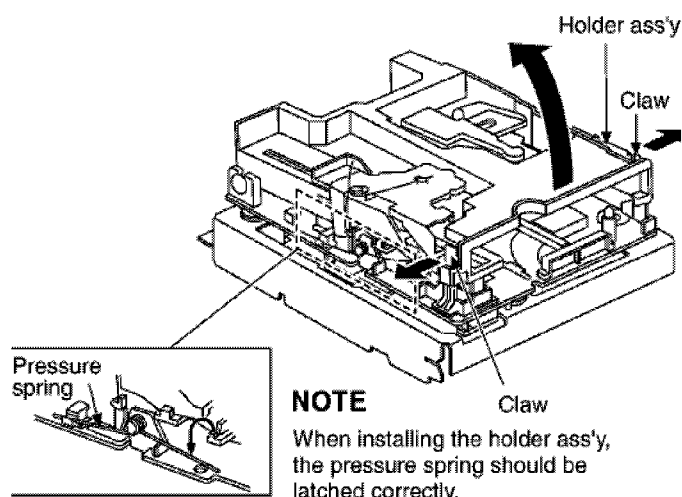
NOTE

Insert a short pin into the traverse unit FFC board.
(Refer to "Handling Precautions for Traverse deck".)

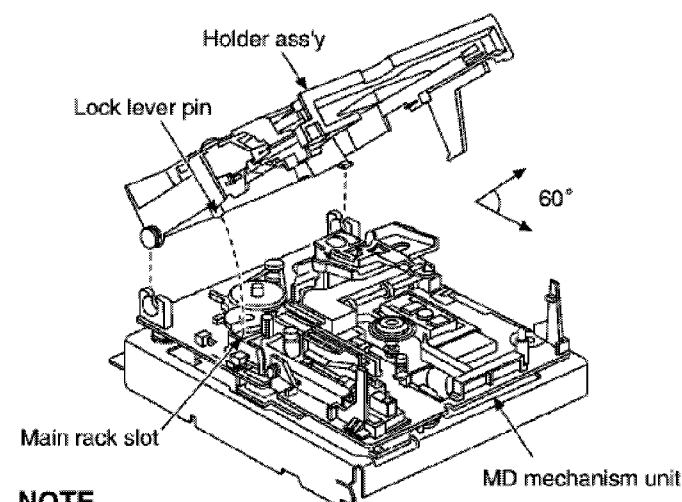


Step 2 Remove the pressure spring from latch.

Step 3 Release the 2 claws and then lift up the holder ass'y.



Step 4 Set the holder ass'y and MD mechanism unit at a 60 degree angle and then pull out the holder ass'y.



NOTE

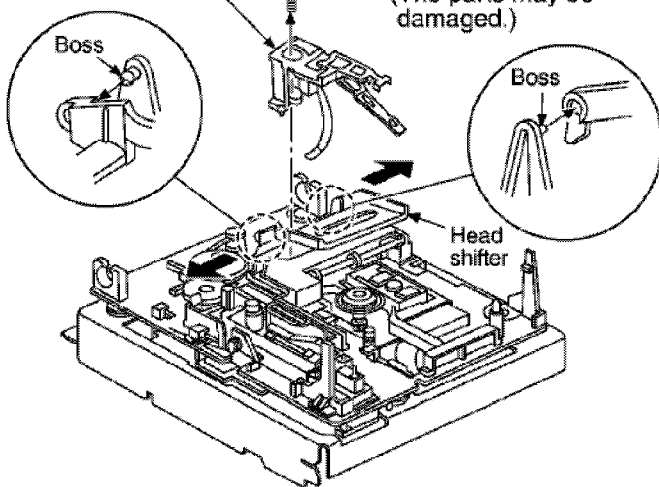
When installing the holder ass'y, align the lock lever pin with the main rack slot.

NOTE

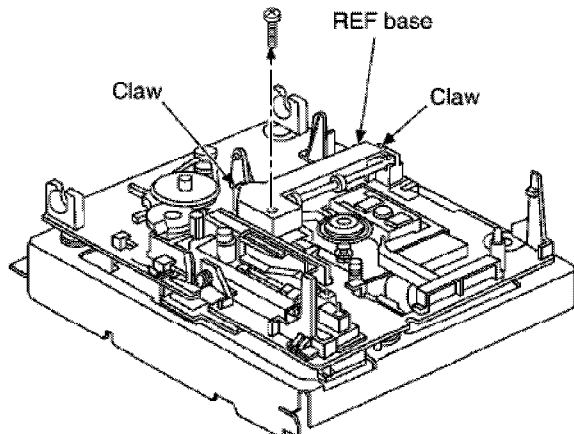
1. Take care not to damage the magnetic head.
2. Do not tighten the set screw (b) in excessive torque. (The parts may be damaged.)

Step 6

Remove the magnetic head [RED0047].



Step 7 Spread the lugs of head shifter and then release the lugs from boss.

Step 8**c**

Step 9 Release the 2 claws and then remove the REF base.

Step 10

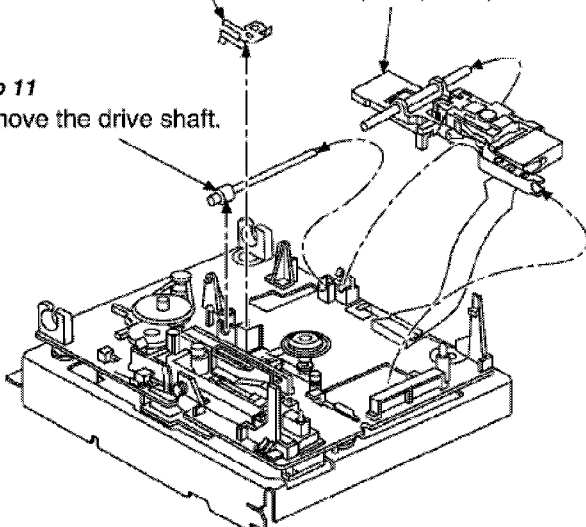
Remove the thrust spring.

Step 12

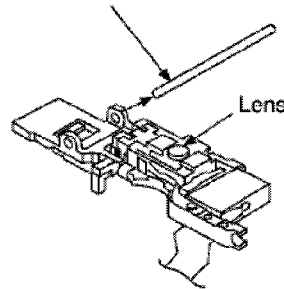
Remove the optical pickup ass'y.

Step 11

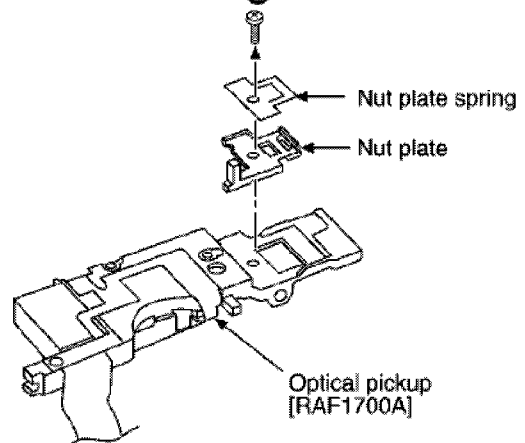
Remove the drive shaft.

**Step 13**

Pull out the main shaft.

**NOTE**

1. Use care to prevent damage the optical pickup, due to the precision construction.
2. Do not apply the grease on the lens of optical pickup.
3. Do not touch the lens of the optical pickup.

Step 14**d**

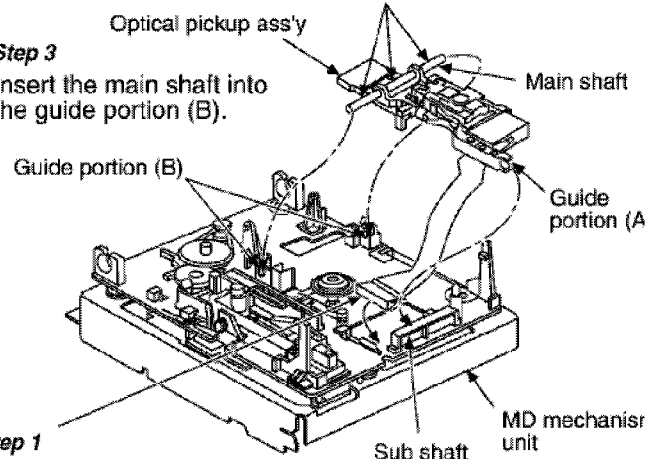
Step 15 Remove the nut plate spring and nut plate.

Notice for installing the optical pickup

Apply the grease
[P/N : RFKXPG641]

Step 3

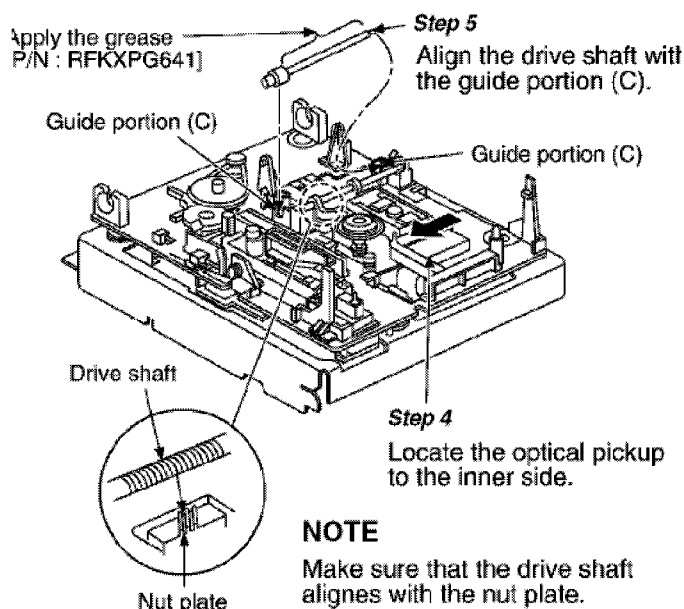
Insert the main shaft into the guide portion (B).

**Step 1**

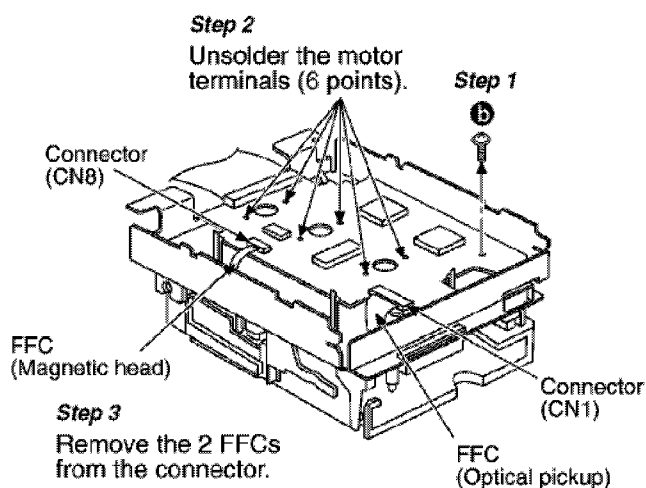
Pass the FFC through the slot of MD mechanism unit.

Step 2 Align the guide portion (A) of optical pickup with the sub shaft.

Note : Take care not to bend the FFC.

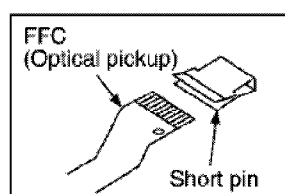


7.3.4. Replacement for the Belt and Loading Motor Assembly

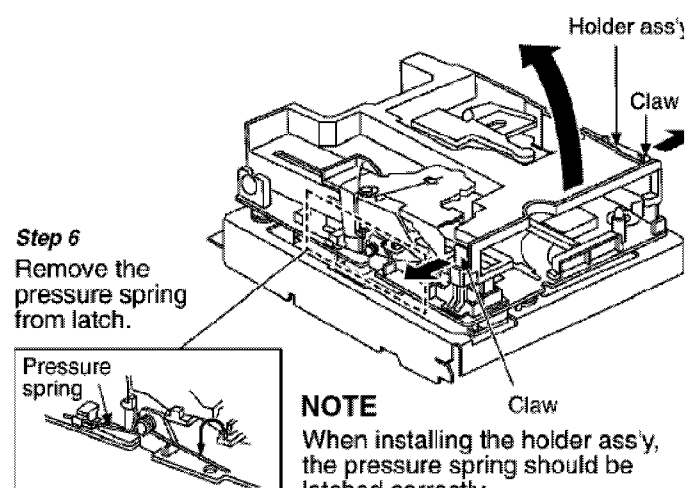
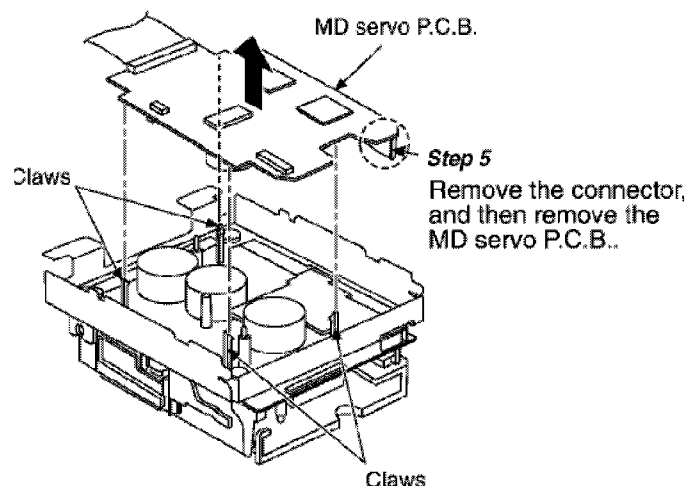


NOTE

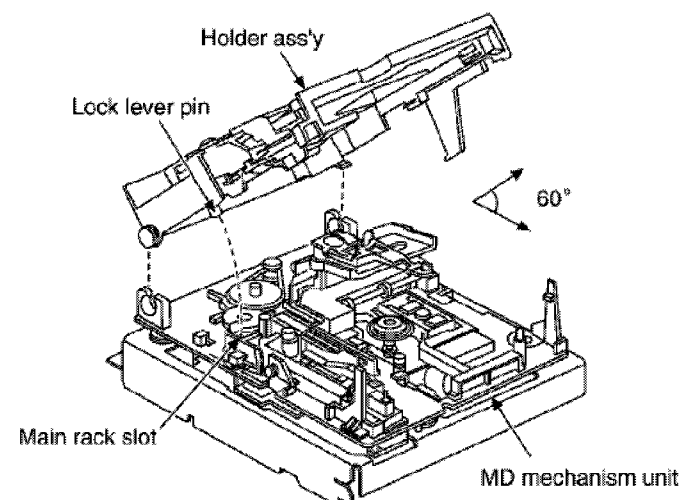
Insert a short pin into the traverse unit FFC board.
(Refer to "Handling Precautions for Traverse deck".)



Step 4 Release the 4 claws.

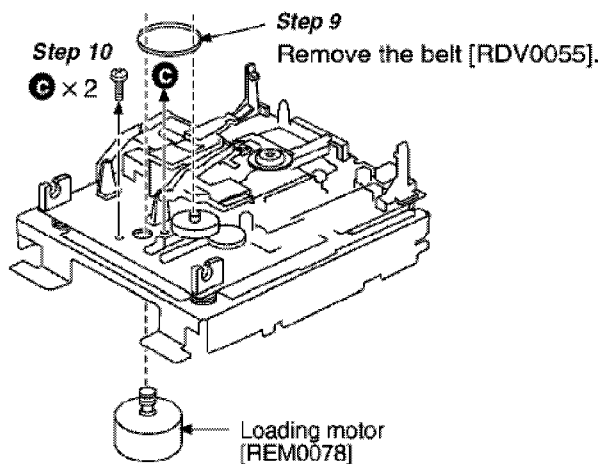


Step 7 Release the 2 claws and then lift up the holder ass'y.

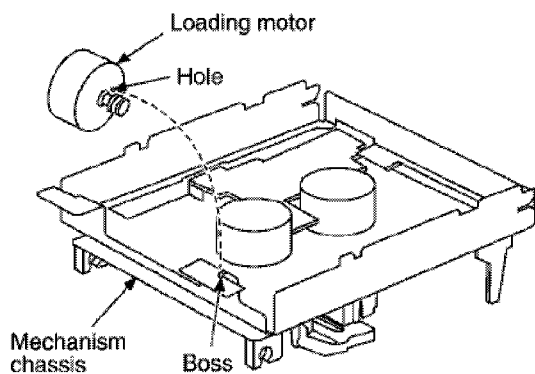


Note : When installing the holder ass'y, align the lock lever pin with the main rack slot.

Step 8 Set the holder ass'y and MD mechanism unit at a 60 degree angle, and then pull out the holder ass'y.



Notice for installing the loading motor



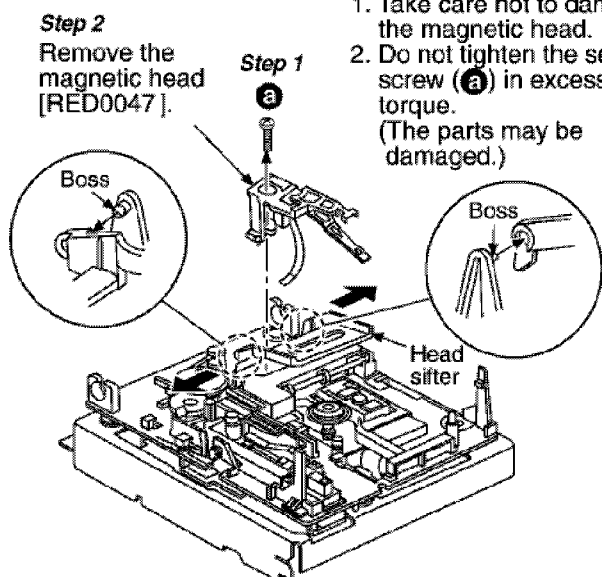
- Align the hole of loading motor with the boss of mechanism chassis and then install the loading motor.

7.3.5. Replacement for the Traverse Motor Assembly

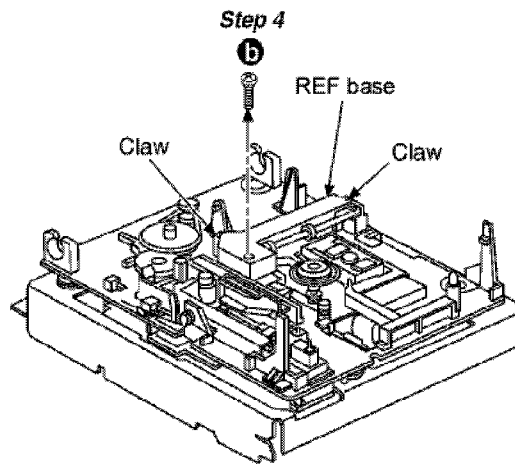
- Follow **Step 1 ~ Step 8** of item 1.3.4 in Main Component Replacement Procedures.

NOTE

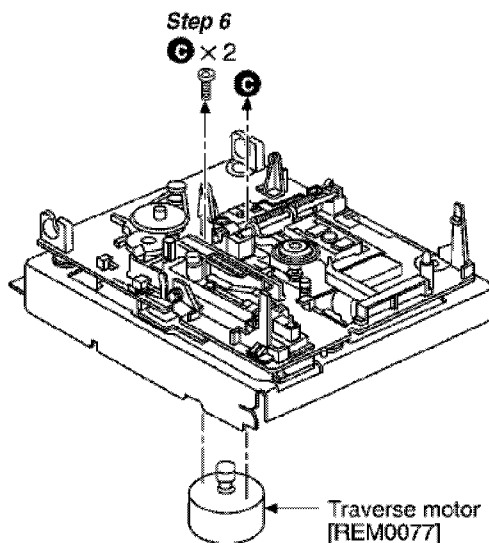
1. Take care not to damage the magnetic head.
2. Do not tighten the set screw (a) in excessive torque. (The parts may be damaged.)



- Step 3** Spread the lugs of head shifter and then release the lugs from boss.

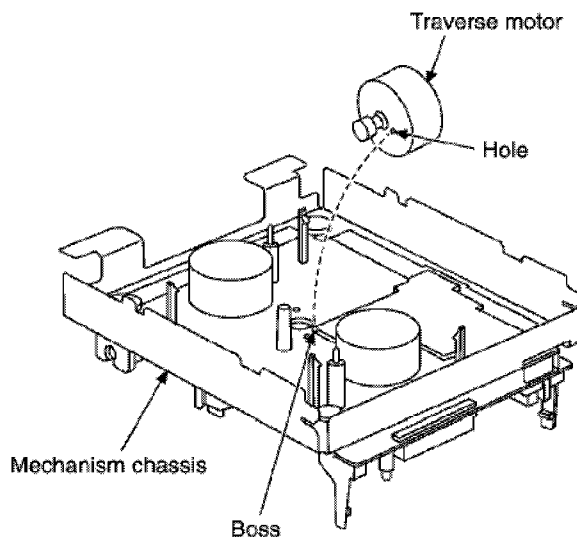


Step 5 Release the 2 claws and then remove the REF base.



Notice for installing the traverse motor

- Align the hole of traverse motor with the boss of mechanism chassis and then install the traverse motor.



8 Self-Diagnostic Display Function

This unit is equipped with a self-diagnostic function which, in the event of a malfunction, automatically display a code indication the nature of the malfunction. Use this self-diagnostic function when servicing the unit.

8.1. Entering self-diagnostic Mode

1. Turn the power on.
2. Press CD play button with no CD, cassette or MD loaded.
3. Press and hold the STOP button for at least 2 seconds, and while still pressing the STOP button, press the Forward Skip/Search button for at least 2 seconds. The unit enters Self-Diagnostic Mode and display "TEST". Then an error code (e.g. H01) is displayed, if any. In the case of no error, "TEST" is displayed on FL.
4. If more than 1 error exists, the display will sequentially show the respective error codes each time the STOP button is pressed.

8.2. Cassette Mechanism Test (For error code H01, H02, H03, H06, F01, F02)

1. Load a cassette tape with the erasure prevention tab, remove from left side only and close the cassette holder.
2. Press "Forward Skip/Search" (Tape will be stop after 2 seconds).

3. Load a cassette tape with the erasure prevention tab, remove from right side only and close the cassette holder.
4. Press "Reverse Skip/Search" (Tape will be stop after 2 seconds).
5. Load a pre-recorded tape with both side record tabs intact and close the cassette holder.
6. Press "Tape Play" (After TPS function, tape will stop automatically).
7. Press "Tape Record" (Tape will not move).
8. Press "Stop" to indicate Error code.ve).
 - If several problem exist, error code will change each time when "Stop" is pressed.
 - (e.g. H01 → H03 → F01 etc.)

8.3. Clearing all error code

1. Press and hold STOP button for 5 seconds.
2. FL indicator shows "CLEAR" for 1 second and change to "TEST".

8.4. Cancelling the Self-Diagnostic mode

1. Press the "Power" button to turn off the system. Press the "Power" button again to turn on the system.

8.5. Description of error code

8.5.1. Power Amplifier Failure (F76)

When power amplifier output failure for power supply failure.

8.5.2. Error detection for CD Block

Error Code	Problem Condition	Possible Cause
F15	CD does not function	REST SW detection error. This error occurs when the Optical Pick Up REST SW (S701) is not detected within the specified time. (about 8 seconds).
H15	The CD tray closes	CD disc tray detect switch NG. (Check and replace)
F26	CD does not function	Transmission error between CD servo LSI and micon. This error occurs between CD servo LSI and micon. This error occurs when the POWER is ON for the CD block and an error is detected after the transmission has started.

8.5.3. Error dection code for MD block

Error Code	Problem Condition	Possible Cause
MD F15	Interval till MD starts playing is too long	Pickup home position sense switch (S8) is defective; check and replace if neccessary.
MD F26	MD is loaded but cannot be played	Communication error between the servo processor IC and the microprocessor IC (system control). Check if the flexible circuit board is disconnected. Displayed when the disc is scratched too.
F22	MD cannot be loaded	MD loading motor or MD loading mechanism error; check and replace.
F28	MD cannot be loaded	Confirm that the disc is not catching on anything. The connection (flexible circuit board or connector cable) between the MD unit and the MD servo circuit board is disconnected or damaged; check and replace if neccessary. The MD unit may be malfunctioning; replace it.

Error Code	Problem Condition	Possible Cause
F29	MD cannot be ejected	Confirm that the disc is not catching anything. The connection (flexible circuit board or connector cable) between the MD unit and the MD servo circuit board is disconnected or damaged; check and replace if necessary. The MD unit may be malfunctioning; replace it.

8.5.4. Error detection code for Cassette Mechanism Block

Error Code	Problem Condition	Possible Cause
H01	Cassette deck malfunctions	MODE SW detection error. Faulty contact or short circuit of mechanism mode switch. (S971)
H02	Recording not possible	REC INH SW detection error. Faulty contact or short circuit of REC INH switch. (S974, S975)
H03	Playback cannot perform.	HALF SW detection error. Faulty contact or short circuit of HALF switch. (S972)
H06	No treble is produce when a normal tape is CrO2 SW detection error played or recorded. Excessive treble is produces when a CrO2/Metal tape is played, or the recorded treble is distorted and at a low level.	CrO2 SW detection error. Faulty contact or short circuit of CrO2 switch (S973).
F01	The tape advances slightly and then stops.	Reel pulse detection error. Faulty reel pulse, faulty hole detect IC. (IC971)
F02	Cassette deck will not perform TPS function	Faulty TPS drive IC. (IC303)

9 Measurement and Adjustment

9.1. Cassette Deck Section

Measurement condition

- Record timer : OFF
- Make sure head, capstan and pressure roller are clean.
- Judgeable room temperature $20 \pm 5^{\circ}\text{C}$ ($68 \pm 9^{\circ}\text{F}$)

Measuring instrument

- EVM (Electronic Voltmeter)

9.1.1. Head Azimuth Adjustment

Note :

If you wish to readjust the head azimuth, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (Shown in Fig. 1)

1. Connect the measuring instrument as shown in Fig. 2.
2. Replace azimuth screws for both forward and reverse direction after removing the screw-locking bond left on the head base.

(Supply part No. of azimuth adjusting screw: **RHD17015**)

3. Playback the azimuth adjustment portion (8kHz, -20dB) of test tape (QZZCFM). Adjust the azimuth adjusting screw until the outputs of the L/Rch are maximized. (Refer to Fig. 3)

Make sure that the difference in the peak level between the left and right channels does not exceed 5dB.

4. Perform the same adjustment in reverse playback mode.

Check of the level difference forward and reverse directions

5. Playback the playback gain adjustment portion (315Hz, 0dB) of test tape (QZZCFM). Check if level difference between forward and reverse direction is within 1.5dB.
6. After the adjustment, apply screwlock to the azimuth adjusting screw.

- Digital frequency counter

Test tape

- Headazimuth adjustment (8 kHz, -20 dB); QZZCFM
- Tape speed adjustment (3 kHz, -10 dB); QZZCWAT
- Playback gain adjustment (315 Hz, 0 dB); QZZCFM
- Normal reference blank tape; QZZCRA
- CrO2 blank tape; QZZCRX

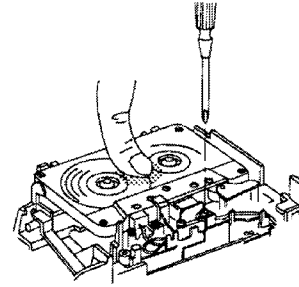


Fig. 1

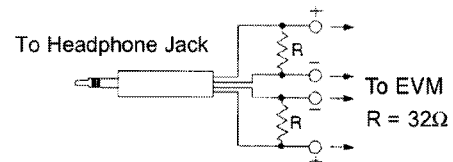


Fig. 2

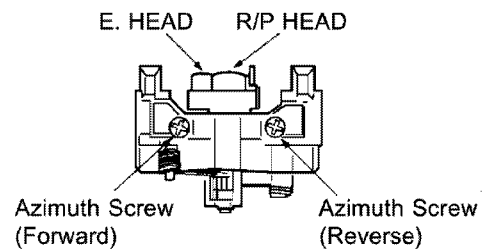


Fig. 3

9.1.2. Tape Speed Adjustment

Normal speed (Standard value : $3000 \pm 90\text{Hz}$)

1. Connect the measuring instrument as shown in Fig. 4.
2. Playback the middle portion of the test tape (QZZCWAT).
3. Adjust motor VR for the output value shown below. (Refer to Fig. 5)

Adjustment target : $3000 \pm 40\text{Hz}$

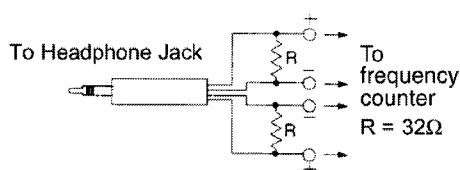


Fig. 4

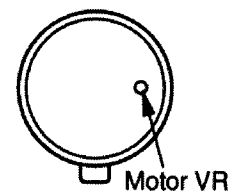


Fig. 5

9.1.3. Bias Vlotage Check

1. Connect the measuring instrument as shown in Fig. 6.
2. Set the unit to "AUX" position.
3. Insert the normal blank tape (QZZCRA) and set the unit to "REC" mode (use "●REC/STOP" key).
4. Measure and make sure that the output is within the standad value.

Standard value : $16 \pm 3\text{mV}$

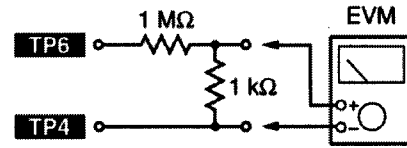


Fig. 6

9.1.4. Bias Frequency Check

1. Connect the measuring instrument as shown in Fig. 7.
2. Set the unit to "AUX" position.
3. Insert the normal blank tape (QZZCRA) and set the unit to "REC" mode (use "●REC/STOP" key).
4. Measure and make sure that the output is within the standard value.

Standard value : $98 \pm 8\text{kHz}$

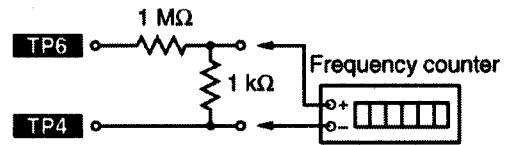


Fig. 7

9.2. Tuner Section

9.2.1. AM-IF Alignment

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 3)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	450kHz 30% Mod. at 400Hz	Point of non-interference. (on about 600kHz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	Z102 (AM IFT)	Adjust for maximum output

9.2.2. AM-RF Alignment

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 3)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	522kHz	Tuning capacitor fully closed	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	Z101 (AM OSC Coil)	Adjust for maximum output
	603kHz	Tuning to signal		Z101 (AM ANT Coil)	

9.3. Alignment Points

<Cassette Deck>

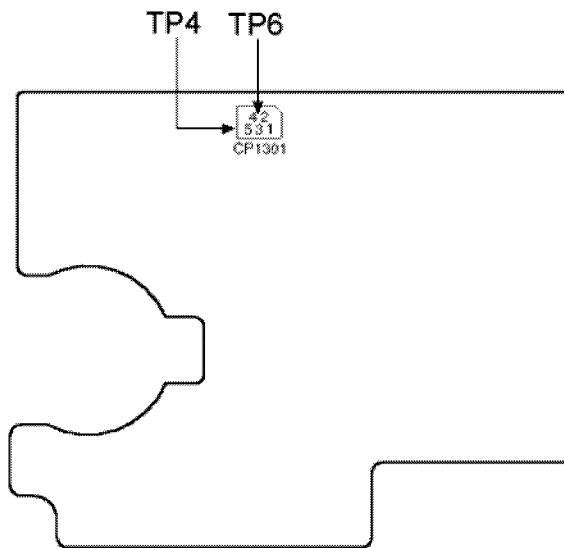


Fig. 8

<Tuner>

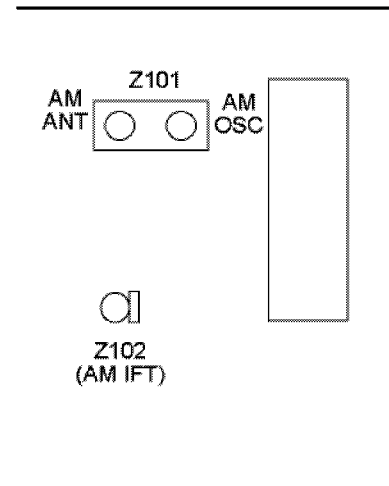


Fig. 9

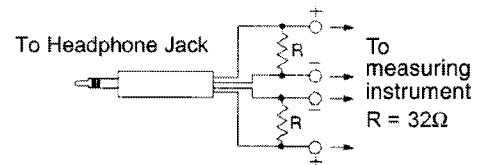


Fig. 10

9.4. Laser Power Adjustment

adjust each laser power : read power for reading (play) and write power for writing (record).

9.4.1. Necessary Instruments

- Laser power meter (Advantest TQ8210 or compatible meter)
- Test disc (Pre-mastered disc RFKV0006 or RFKV0014)
- Recordable disc available on sales root (with music recorded)
- Insulated driver for adjustment such as a ceramic driver
- Jitter meter

9.4.2. Set the Unit to the Adjustment Mode

1. Perform the item "8.1.6. Checking for the MD Servo P.C.B." in "Operation Check and Main Component Replacement Procedures", Step 1 to Step 4.
2. Turn the power on.
3. Press CD play button with no CD, cassette or MD loaded.
4. While pressing STOP button on the unit, press 4 and 7 on the remote control. The unit enters doctor mode for adjustment.

Cautions

1. About handling the MD unit

- The magnetic head is a precision unit and is very fragile. Do not deform it.
- Laser diode in the optical pickup may be destroyed by the static electricity generated in your clothes or body. Be especially careful with the static electricity.

- The optical pickup is structured extremely precisely. Do not subject to the strong impact or shock. Do not touch the lens.

2. About handling the magnetic head

When replacing the magnetic head, do not tighten the mounting screw (RHD17022) too firmly. If the screw is tightened too much to deform the resin, the position of the head is moved, and this affects its recording operation.

Recommended torque for mounting screw: 700 g cm +/- 100 g cm

Reference: This is the same force as using a screwdriver with a 15-mm diameter grip, you fasten the screw naturally with your thumb and index finger.

3. About the driver for adjusting laser power

Use only insulated driver such as a ceramic driver. With the metal driver, it is not possible to adjust properly because of the induction noise. Also, if it short-circuits with the chassis, it may destroy or damage the laser diode.

Recommended driver: VESSEL 9000 1.8 -30 (Ceramic driver)

Cautions on optical pickup:

- The optical pickup and the magnetic head are structured precisely; therefore, they are very fragile. Be careful not to touch them with the edge of the laser power meter.
- The sensor of the laser power meter is a very fine part. Be careful not to touch it to the optical pickup lens.

- The focus point of the laser reaches to 356°F. Therefore, avoid adjusting using laser power for a long time because the sensor of the laser power meter may be burned.
- Do not allow the write power to even momentarily reach or exceed 7.5 mW. Doing so will result in damage to the optical pickup.
- Do not set the unit to the laser power adjustment mode with the MD loaded. Doing so may result in damage to the MD.

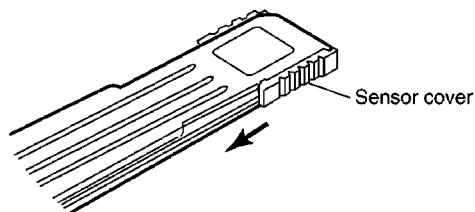
9.4.3. Adjustment Procedure

1. Enter "1" using numeric pad on the remote control with no MD loaded.

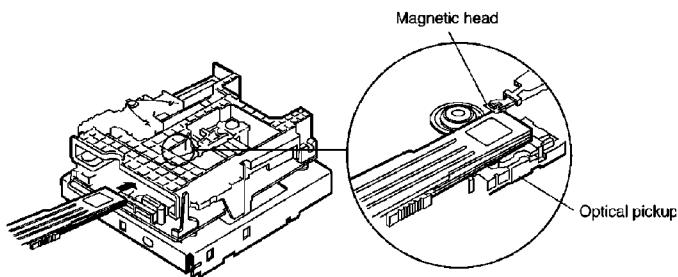
→ FL display "Rough ADJ".

(Read power adjustment mode)

2. Slide sensor cover on the laser power meter. (Fig. 1)

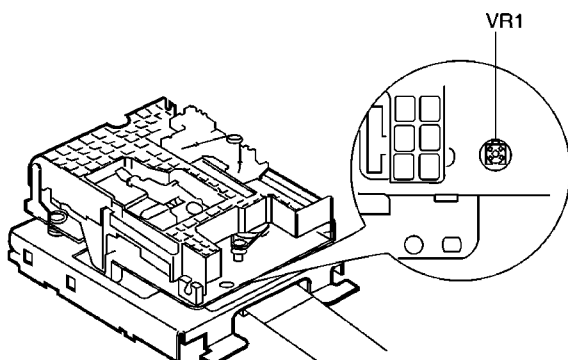


3. Place the sensor on the laser power meter right on top of the optical pickup. (Fig. 2)



4. Confirm that the reading of the laser power meter is within the standard value. If the value is out of the range, adjust VR1. (Fig. 3)

Standard value (read power) : 600~650 μ W



Cautions

Proceeding on to the subsequent adjustment procedure with the read power exceeding 650 μ W will result in damage to the optical pickup.

5. Press "MEMORY/ENTER" button on the unit.

→ FL display "ROUGH ADJ.OK" flash for 3 times and

display the next indication.

→ FL display "FINE ADJ"

(Write power adjustment mode)

6. Adjust VR1 until reading of the laser power meter is within the standard value. (Fig. 3)

Standard value (write power) : 6.8mW \pm 0.1mW

Cautions

Do not allow the write power to reach or exceed 7.5mW, even for a moment. Doing so will result in damage to the optical pickup.

7. Press "MEMORY/ENTER" button on the unit.

→ FL display "FINE ADJ.OK" flash for 3 times and display the next indication.

→ FL display "ROM-D.CHECK"

(ROM data check mode)

8. Confirm that the reading of the laser power meter is within the standard value.

Standard value (ROM data laser power) : 320~380 μ W

9. Press "MEMORY/ENTER" button on the unit.

→ FL display "RAM-D.CHECK"

(RAM data check mode)

10. Confirm that the reading of the laser power meter is within the standard value.

Standard value (RAM data laser power) : 620~740 μ W

11. Press "EJECT" to cancel adjustment mode, then press "POWER" button to turn off the power.

Note : If the value in step 8 and step 10 is out of standard value, turn off the power and readjust from the beginning.

Caution

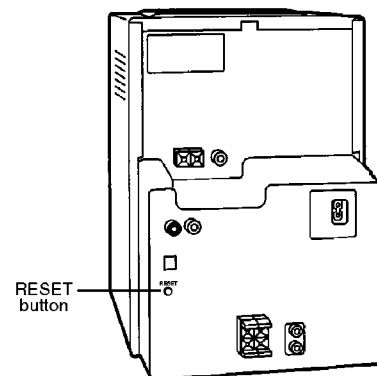
Upon completion of adjustment, make sure to perform reset operation.

[Operation Procedures]

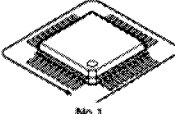
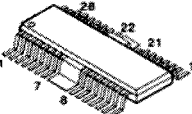
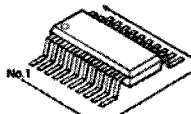

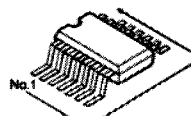
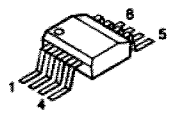
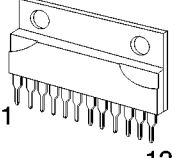
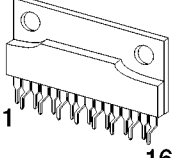

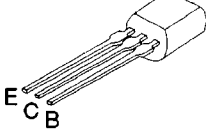
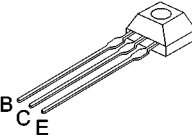
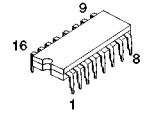
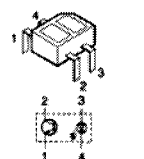
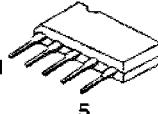
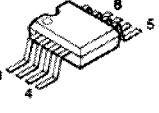

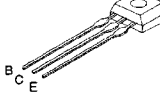
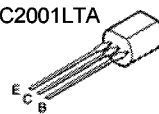
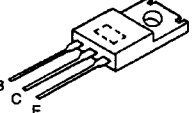
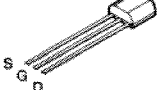
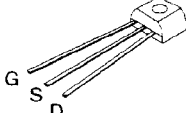
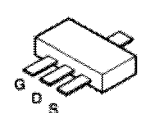
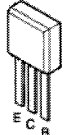
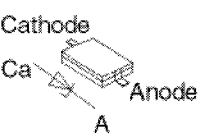
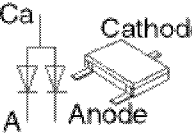
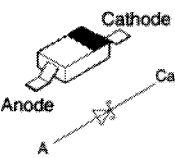
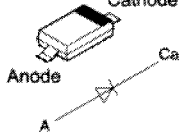
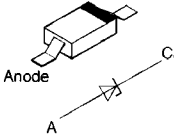
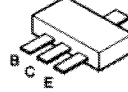
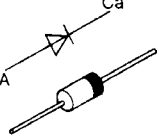
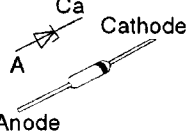
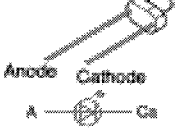
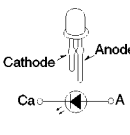
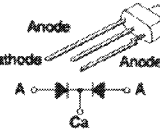
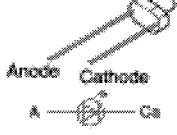
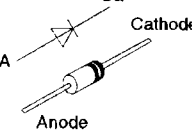
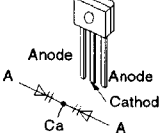
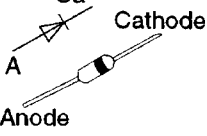
1. Pull out the power plug.

2. Press [Reset] button on the rear side of the unit with a sharp object for more than 5 seconds.

The unit returns to the state same as shipping from the factory. (Memories such as preset broadcasting station will be lost.)



10 Illustration of IC's, Transistors and Diodes

 <p>AN8772FHQ (48P) MN66616RA4 (100P) MN662790RSC (80P) M30622MC4A3F (100P) MN101D03DAA1 (80P)</p>	 <p>AN8814SB-E1 BA5948FPE2</p>	 <p>AK4518VF-E2 (24P) LB1830MS-TLM (10P) LA1833NMN-TLM (24P) LC72131MDTRM (20P) BU2090AF-E2 (16P) AN8839NSBE2 (28P)</p>	 <p>RN5RG33AA-TL RN5RZ26BA-TR</p>		
 <p>TC74HCT00AFL (14P) TC74HCT7007A (14P)</p>	 <p>TC7W04FTE12L</p>	 <p>AN7135</p>	 <p>AN7194K-LD</p>	 <p>UPC29M33HF</p>	 <p>KTA1504GRTA KRC101MTA</p>
 <p>KRA102MTA KRC102MTA KRC110MTA KRC113MTA KRC119MTA KRA110MTA KRA119MTA</p>	 <p>TA8142AP</p>	 <p>ON2180RLC1</p>	 <p>BA7755A</p>	 <p>BA4558FE2</p>	
 <p>2SA1037AKSTX 2SB1295-6-TB 2SB1462STX KTC3875GRTA KRC104STA DTC143XKA146 DTC114YETL DTA143XKA146</p>	 <p>2SA933SSTA KTC3199GRTA 2SD2144STA 2SC2786MTA 2SC2787FL1TA</p>	 <p>2SD592ARTA 2SA952LTA 2SC1845FTA 2SD965RTA 2SC2001LTA</p>	 <p>KTC2026□ KTA1046</p>	 <p>2SJ498CTA</p>	
 <p>2SK544F-AC</p>	 <p>2SJ278MYTR 2SK1764KYTR</p>	 <p>2SB1030RTA 2SC2058SPTA</p>	 <p>1SS355TE17 UDZ3TE175R1B</p>	 <p>DAP202KT146</p>	 <p>MA728TX</p>
 <p>SC80209TE12R</p>	 <p>MA8056MTX</p>	 <p>2SB1121ST-TD</p>	 <p>RL1N4003N02 AK03VK</p>	 <p>MTZJ5R1BTA MTZJ8R2BTA MTZJ16ATA MTZJ6R8ATA MTZJ3R9BTA MTZJ8R2CTA MTZJ5R6BTA</p>	
 <p>SLR325MCT31W</p>	 <p>NSPW510BS</p>	 <p>SML79455C</p>	 <p>SLC-22VR</p>	 <p>SB360L6508</p>	 <p>SVC211SPA-AL</p>
 <p>RVD1SS133TA MA165TA RB441Q40T77</p>					

11 Terminal Function of IC's

11.1. IC1 (AN8772FHQ) : RF AMP

Pin No.	Mark	I/O	Function
1	CENV D	—	D signal det. capacitor connection terminal
2	LDO	O	Laser amp output terminal
3	APCPD	I	Photo diode light quantity det. input terminal
4	LD IN	I	Laser amp reverse input terminal
5	APC REF	I	APC amp criterion voltage input terminal
6	TEMP IN	I	Temperature sensor amp input terminal
7	TEMP	O	Temperature sensor amp output terminal
8	ADIP	O	ADIP signal output terminal
9	TOFS	I	Tracking error offset adjustment terminal
10	TBAL	I	Tracking balance adjustment terminal
11	TE	O	Tracking error signal output terminal
12	CRS IN	I	Track cross input terminal
13	TGAIN	I	Tracking gain adjustment input terminal
14	LNP	O	Lens position signal output terminal
15	AB GAIN	I	APP compensation signal gain adjustment terminal
16	FE	O	Focus error signal output terminal
17	AS GAIN	I	AS gain adjustment terminal
18	FBAL	I	Focus balance adjustment terminal
19	AS/MON3T	O	AS/3TMON signal output terminal
20	CEA	I	3T envelope det. capacitor connection terminal
21	BDO/TRCR S	O	BDO/Track cross signal output terminal
22	CBD O	O	BDO detection capacitor connection terminal

Pin No.	Mark	I/O	Function
23	OFT O	O	Off track detection signal output terminal
24	GND	—	GND terminal
25	OFT IN	I	Off track detection signal input terminal
26	VCC	I	Power supply terminal (+3V)
27	NRFDET/ OFTR	O	NRFDET/off track signal output terminal
28	NRFLD	I	Serial command latch signal input terminal
29	RF DATA	I	Serial command data signal input terminal
30	RFCK	I	Serial command clock input terminal
31	NRFSTBY	I	Standby control signal input terminal
32	OUT RF	O	EFM signal output terminal
33	CRF AGC	—	RFAGC capacitor connection terminal
34	EQ IN	I	EQ input terminal
35	ARFO	O	RF amp. output terminal
36	SVREF	I	Reference voltage input terminal
37	VREF	O	Reference voltage output terminal
38	RF1	I	RF1 signal input terminal
39	RF2	I	RF2 signal input terminal
40	F1	I	F1 signal input terminal
41	F2	I	F2 signal input terminal
42	CLPF1	—	APP compensation LPF capacitor connection terminal
43	CLPF2	—	RF equalizer adjustment resistor connection terminal
44 ~47	A ~D	I	Beam A~D signal input terminal
48	CENVC	—	Beam E signal detection capacitor connection terminal

11.2. IC2 (AN8814SB-E1) : FOCUS/TRACKING COIL, SPINDLE/TRVERSE MOTOR DRIVE

Pin No.	Mark	I/O	Function
1	REG B	—	3.3V external transistor control terminal (Not used, open)
2	REG M	—	3.3V regular output monitor terminal (Not used, connected to GND)
3	N.C.	—	Not used, open
4	OPO	O	Op-amp output terminal
5	OP-	O	Op-amp invert output terminal
6	OP+	O	Op-amp non-invert output terminal (Not used, connected to GND)
7	Vcc	I	Power supply terminal
8	1/2 PVcc2	O	1/2 PVcc output terminal 1 (Connected to GND through capacitor)
9	PVcc2	I	Power supply terminal for driver
10	PGND2	—	GND terminal
11	VO4-	O	Tracking coil driver output terminal
12	VO4+	O	Tracking coil driver output terminal
13	VO3-	O	Focus coil driver output terminal
14	VO3+	O	Focus coil driver output terminal
15	VO2-	O	Traverse motor drive output terminal
16	VO2+	O	Traverse motor drive output terminal
17	VO1-	O	Spindle motor drive output terminal
18	VO1+	O	Spindle motor drive output terminal

Pin No.	Mark	I/O	Function
19	PGND1	—	GND terminal
20	PVcc1	I	Power supply terminal
21	1/2 PVcc1	O	1/2 PVcc output terminal 1 (Connected to GND through capacitor)
22	VREF	I	Reference voltage input
23	IN1	I	Spindle motor drive input terminal
24	PC1	I	Power cut 1 input terminal
25	IN2	I	Traverse motor drive input terminal
26	PC2	I	Power cut 2 input terminal
27	IN3	I	Focus drive input terminal
28	IN4	I	Tracking drive input terminal

11.3. IC3 (MN66616RA4) : ATRAC ENCODER/DECORDER, SERVO SIGNAL PROCESSOR

Pin No.	Mark	I/O	Function
1	ADIP	I	ADIP FM signal input terminal
2	LNP	I	Lens position signal input terminal
3	FE	I	Focus error signal input terminal
4	TE	I	Tracking error signal input terminal
5	AS	I	AS signal input terminal
6	DRMONI	I	Drive voltage monitor input terminal
7	BAT	I	Battery power supply terminal
8	AMONI	—	Servo analog monitor signal output (Not used, poen)
9	VREFI	I	Reference voltage input terminal
10	TOFS	O	Tracking off-set adjustment output terminal
11	FBAL	O	Focus balance adjustment output terminal
12	TBAL	O	Tracking balance adjustment output terminal
13	TGAIN	O	TE error gain adjustment output terminal
14	ASGAIN	O	Main beam amp gain adjustment output terminal
15	ABGAIN	O	APP adjustment output terminal
16	AV _{DD} 1	I	Power supply terminal
17	AV _{SS} 1	—	GND terminal
18	FOD	O	Focus drive signal output terminal
19	TRD	O	Tracking drive signal output terminal
20	TVD	O	Traverse motor drive signal output terminal
21	SPD	O	Spindle motor drive signal output terminal
22	SPON	O	Drive IC spindle ON signal output terminal
23	TVON	O	Drive IC traverse ON signal output terminal
24	DV _{DD} 0	I	Power supply terminal
25	FG	I	FG input terminal
26	NRECT	O	Rec/Play switching signal output terminal
27	IVDD2	—	Power supply terminal for I/O pad
28	IVDD0	—	Power supply terminal for I/O pad
29	DVss0	—	GND terminal
30	RAD12	—	DRAM address output terminal (Not used, open)
~32	~RAD10		
33	RAD9	O	DRAM address output terminal
~42	~RAD0		
43	RDT3	I/O	DRAM data input/output terminal
~46	~RDT0		
47	NRAS	O	DRAM row address strobe output terminal
48	NCAS	O	DRAM culum address strobe output terminal
49	NWE	O	DRAM write enable output terminal
50	NRST	I	Reset signal input terminal
51	SELAD	I	MSP/MDA,I/F address select input terminal ("H" Address)
52	SSCK	I	MSP/MDA,I/F clock input terminal
53	SSDW	I	MSP/MDA,I/F write data input terminal
54	SSDR	O	MSP/MDA,I/F read data output terminal
55	MDISY	O	Leader synchronous signal output
56	SCTSY	O	ADIP synchronous noise output terminal
57	SGSYNC	O	Frame synchronous signal output terminal
58	DVDD1	I	Power supply terminal
59	IVDD1	—	Power supply terminal for I/O pad

Pin No.	Mark	I/O	Function
60	DVss1	—	GND terminal
61	FS384	O	384 Fs output terminal
62	SCL	O	Bit clock output terminal
63	SWS	O	Word clock output terminal
64	SDAP	O	Audio data output terminal
65	SDAR	I	Audio data input terminal
66	LRCK	I	CD word clock input terminal (Connected to GND)
67	BCK	I	CD bit clock input terminal (Connected to GND)
68	DATA	I	CD data input terminal (Connected to GND)
69	TX	O	Digital audio interface signal output terminal (Not used, open)
70	RX1	I	Digital audio interface signal 1 input terminal
71	RX2	I	Digital audio interface signal 2 input terminal
72	NREFM	—	EFM modulation inverted output (Not used, open)
73	REFM	O	EFM modulation output terminal
74	MONI3	—	Monitor signal output (Not used, open)
75	MONI2	—	Monitor signal output (Not used, open)
76	MONI1	—	Monitor signal output (Not used, open)
77	MONI0	—	Monitor signal output (Not used, open)
78	TS3	—	Not used, connected to GND
79	TS2	—	Not used, connected to GND
80	TS1	—	Not used, connected to GND
81	TS0	—	Not used, connected to GND
82	EXSYSCK	—	External system clock input terminal (Not used, connected to GND)
83	DVDD2	I	Power supply terminal
84	XI	I	Crystal oscillator input terminal (F=16.9344MHz)
85	XO	O	Crystal oscillator output terminal (F=16.9344MHz)
86	VDss2	—	GND terminal
87	RFDAT	O	RF serial data output terminal
88	RFCK	O	RF serial clock output terminal
89	NRFLD	O	RF serial load output terminal
90	TRCRS	I	Track cross input terminal
91	OFTR	I	Off-track signal input terminal
92	APCD	O	Laser power PWM output terminal
93	EXEFMCK	I	External FM clock input terminal (Not used, connected to GND through resistor)
94	PEFM1	O	EFM loop filter output terminal
95	EEMIREF	I	EFM PLL reference current input terminal
96	EEMPLLF	O	EFM PLL filter output terminal
97	PEFMS	I	EFM signal input terminal
98	AV _{DD} 0	I	Power supply terminal
99	AVss0	—	GND terminal
100	TEFSEL	—	Not used, open

11.4. IC10 (MN101D03DAA1) : SYSTEM CONTROL

Pin No.	Mark	I/O	Function
1	DACRST	O	DAC reset signal output terminal to IC4 ("L":Reset)
2	DEO	O	DE emphasis signal output terminal to IC4("L":DE emphases)
3	MUTE	—	AD-DA mute output terminal (Not used, open)
4	AD RST	O	Reset signal output terminal
5	NRFSTBY	O	Standby control signal output terminal ("L":Standby)
6	PC	O	Transistor drive signal output terminal ("H":Power ON)
7	MSP RST	O	MSP reset signal output terminal ("L":Reset)
8	LOAD1	O	Loading motor drive 1 output terminal
9	LOAD0	O	Loading motor drive 0 output terminal
10	NEFMON	O	Magnetic head current output terminal
11	TEST01	O	Test signal output terminal (Not used, open)
12	TVSW	I	Traverse innermost detection switch signal input terminal
13	DISC IN	I	Disc detection switch signal input terminal
14	REFLECT	I	Reflection rate switch signal input terminal
15	LOAD SW0 (OPEN)	I	Loading mechanism position det. Switch 0 signal input terminal
16	LOAD SW1 (TRG)	I	Loading mechanism position det. Switch 1 signal input terminal
17	LOAD SW2 (PLAY/REC)	I	Loading mechanism position det. Switch 2 signal input terminal.
18	LOAD SW3 (PLAY)	I	Loading mechanism position det. Switch 3 signal input terminal
19	PROTECT	I	Erase prevention switch signal input terminal
20	MMOD	—	Connected to GND
21	RST	I	Reset signal input terminal ("L":Reset)
22	UNIT TEST	I	Test signal input terminal (Open)
23	CS2	I	Test signal input terminal (Open)
24	SCTSY	I	Micro computer interrupt signal input terminal (SUBQ/ADIP simultaneous signal)
25	MDISY	I	Micro computer interrupt signal input terminal (MD simultaneous signal)
26	PANEL REQ	I	Panel I/F request signal input terminal
27 ~29	LED OUT1 ~LED OUT3	O	Drive signal output terminal to LED DRIVE ("H":LED ON)
30	TEST02	O	Test signal output terminal (Not used, open)
31	V _{DD} 2(3V)	I	Power supply terminal (+3V)
32	OSC1	I	Crystal oscillator input terminal (f=10.02MHz)
33	OSC2	O	Crystal oscillator output terminal (f=10.02MHz)
34	V _{SS}	—	GND terminal
35	XI	I	Not used, connected to GND
36	XO	O	Not used, open
37	VSS	—	GND terminal
38	TEST03	O	Test signal output terminal (Not used, open)
39	EEPCS	O	EEPROM chip select signal output terminal (Not used, open)
40	EEPCK	O	EEPROM clock signal output terminal (Not used, open)
41	EEPDATA	I/O	EEPROM data in/output terminal (Connected to GND through resistor)

Pin No.	Mark	I/O	Function
42	TEST04	O	Test signal output terminal (Not used, open)
43	TEST05	O	Test signal output terminal (Not used, open)
44	CFSYNC	I	ATRACK management frame simultaneous signal input terminal
45	TEST06	O	Test signal output terminal (Not used, open)
46	TEST07	I	Connected to rec/play switch signal
47	TOK OK	O	Not used, open
48	HF ON	—	Drive signal output terminal to Q3 (POWER SUPPLY CONTROL)
49	PANEL CLK	I	Panel I/F clock input terminal
50	PANEL DATA I	I	Panel I/F data input terminal
51	PANEL DATA O	O	Panel I/F data output terminal
52	PANEL CS	O	Panel I/F chip select output terminal
53	SELAD	O	Micro computer I/F address select output terminal
54	SSCLK	O	Micro computer I/F clock output terminal
55	SSDR	I	Micro computer I/F reading data input terminal
56	SSDW	O	Micro computer I/F writing data output terminal
57	LCDCK	O	LCD clock test signal output terminal (Connected to power supply through resistor)
58	ADRS TEST RXD	O	Test signal output terminal (Connected to power supply through resistor)
59	LCD DATA TXD	O	Test signal output terminal (Not used, open)
60	VREF-	—	Connected to GND
61	TEMP	I	Temperature sensor amp input terminal
62	KEY1	I	Key input 1 terminal
63	KEY2	I	Key input 2 terminal
64	MO LOAD	I	Test signal input terminal ("L":Without loading mechanism) (Open)
65	SRVTEST	I	Test signal input terminal ("L":Servo test mode) (Open)
66	LOAD P	I	Test signal input terminal (Open)
67	TEST KEY IN	I	Test signal input terminal ("L":Unit key mode) (Open)
68	SRV LOAD	I	Test signal input terminal ("L":Using for servo primary values EEPROM)
69	VCC 3V	I	Power supply terminal (+3V)
70	VCC 5V	I	Power supply terminal (+5V)
71	SELADDA	I	AD/DA converter select signal input terminal (Open)
72	SLOCK	O	Spindle lock test signal output terminal (Not used, open)
73	TLOCK	O	Tracking lock signal output terminal ("H":lock) (Not used, open)
74	FLOCK	O	Focus lock test signal output terminal ("H":lock) (Not used, open)
75	ERROR	O	Servo error test signal output terminal (Not used, open)
76	BUSY	O	Servo busy test signal output terminal (Not used, open)
77	SBPRETRY	O	Signal management retry test signal output terminal (Not used, open)
78	SRVRETRY	O	Servo retry test signal output terminal (Not used, open)
79	ARDSKIP	O	Address skip test signal output terminal (Not used, open)
80	SPMWE	O	SPM take in test signal output terminal

11.5. IC72 (M51V4400D7FS) : 4M DRAM

Pin No.	Mark	I/O	Function
1	DO1	I/O	DRAM data 1 in/output terminal
2	DO2	I/O	DRAM data 2 in/output terminal
3	WE	I	DRAM light enable input terminal
4	RAS	I	DRAM low address strobe input terminal
5	A9	I	DRAM address 9 input terminal
9	A0	I	DRAM address 0 input terminal
10~12	A1~A3	I	DRAM address 1~3 input terminal

Pin No.	Mark	I/O	Function
13	VCC	I	Power supply terminal
14~18	A4~A8	I	DRAM address 4~8 input terminal
22	OE	I	DRAM output enable input terminal (Not used, connected to GND)
23	CAS	I	DRAM calam address strobe input terminal
24	DO3	I/O	DRAM data 3 in/output terminal
25	DO4	I/O	DRAM data 4 in/output terminal
26	VSS	—	GND terminal

11.6. IC701 (AN8839NSBE2) SERVO AMPLIFIER

Pin No.	Mark	I/O	Function
1	PDE	I	Tracking signal input terminal 1 (E ch)
2	PDF	I	Tracking signal input terminal 2 (F ch)
3	VCC	I	Power supply connection
4	PDA	I	Focus signal input terminal 1 (A ch)
5	PDB	I	Focus signal input terminal 2 (B ch)
6	LPD	I	Laser PD connection
7	LD	O	Laser power auto control output
8	RF	O	RF signal output
9	RFIN	I	RF signal input
10	CSBRT	I	Capacitor for detection connection
11	CEA	I	Capacitor connection for HPF amplifier
12	BDO	O	BDO output ("H" : drop out)
13	LDON	I	LD APC input ("H" : ON, "L" : OFF)
14	GND	—	Ground connection

Pin No.	Mark	I/O	Function
15	/RFDET	O	NRFDET output ("L" : detection)
16	PDOWN	O	CROSS output (Track cross signal output)
17	OFTR	O	Off-track output ("L" : ON track, "H" : OFF track)
18	N.C.	O	VDET output ("H" : Vibration detected)
19	ENV	O	RF envelope detection
20	N.C.	I	Not used, connected to power supply
21	N.C.	I	Oscillation detect signal input
22	TEN	I	Tracking error signal input
23	TEOUT	O	Tracking error signal output
24	FEOUT	O	Focus error signal output
25	FEN	I	Focus error signal input
26	VREF	O	Reference voltage output
27	TBAL	I	Tracking balance signal input
28	FBAL	I	Focus balance signal input

11.7. IC702 (MN662790RSC) SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR / DIGITAL FILTER / D/A CONVERTER

Pin No.	Mark	I/O	Function
1	BCLK	O	Bit Clock Output for Serial Data
2	LRCK	O	L/P Clock Signal Output
3	SRDATA	O	Serial Data Output
4	DVDD1	I	Power Supply Input (for Digital Circuit)
5	DVSS1	I	Ground (for Digital Circuit)
6	TX	O	Digital Audio Interface Signal Output (Latches Data at first Transistion)
7	MCLK	I	Microprocessor Command Clock Signal Input
8	MDATA	I	Microprocessor Command Data Signal Input
9	MLD	I	Microprocessor Command Load Signal Input
10	SENSE	I	Sense Signal Output (OFT, FESL, MAGEND, NAJEND, POSAD, SFG) (Not Used, Open)
11	/FLOCK	O	Focus Servo Feeding Signal Output ("L": Feed)
12	/TLOCK	O	Tracking Servo Feeding Signal Output ("L":Feed)
13	BLKCK	O	Sub-Code Block Clock Signal Output (fBLKCK = 75Hz during Normal Playback)

Pin No.	Mark	I/O	Function
14	SQCK	I	External Clock Signal Input for Sub-Code Q Resistor)
15	SUBQ	O	Sub-Code Q Code Output
16	DMUTE	I	Muting Input ("H": Mute)
17	STAT	O	Status Signal Output (CRC, CUE, CLVS, TTSTVP, FCLV, SQCK)
18	/RST	I	Reset Signal Input
19	SMCK	O	1/2 - Divided Clock Signal of Crystal Oscillating at MSEL= "H" (fSMCK=8.4672 MHz) 1/4 - Divided Clock Signal of Crystal Oscillating at MSEL= "L" (fSMCK=4.2336 MHz)
20	CSEL	I	Frequency Selection Terminal H= 33.8688 MHz; L= 16.9344 MHz
21	TRV	O	Traverse Forced Feed Output
22	TVD	O	Traverse Drive Output
23	PC	O	Traverse (Spindle) Motor ON Signal Output ("L":ON)
24	ECM	O	Spindle Motor Drive Signal Output (Forced Mode Output)
25	ECS	O	Spindle Motor Drive Signal Output. (Servo Error Signal Output)
26	KICK	O	Kick Pulse Output
27	TRD	O	Tracking Drive Output
28	FOD	O	Focus Drive Output
29	VREF	I	D/A (Drive) Output (TVD, ECS, TRD, FOD, FBAL, TBAL) Reference Voltage Input

Pin No.	Mark	I/O	Function
30	FBAL	O	Focus Error Signal Input (Analog Input)
31	TBAL	O	Tracking Balance Adjustment Output
32	FE	I	Focus Error Signal Input (Analog Input)
33	TE	I	Tracking Error Signal Input (Analog Input)
34	RFENV	I	RF Envelope Signal Input
35	VDET	I	Vibration Detection Signal Input ("H": Detect)
36	OFT	I	Off-Track Signal Input ("H": Off Track)
37	TRCRS	I	Track Cross Signal Input)
38	/RFDET	I	RF Detection Signal Input ("L": Detect)
39	BDO	I	Dropout Signal Input ("H": Dropout)
40	LDON	O	Laser on Signal Output ("H": ON)
41	PLL2	I/O	PLL Loop Filter Characteristic Switching Terminal
42	TOFS/DSL2	O	Tracking Offset Alignment Output/ DSL Balance Output (DA Output)
43	WVEL	O	Double Speed Status Signal Output ("H":DS)
44	ARF	I	RF Signal Input
45	IREF	I	Reference Current Input
46	DRF	I	DSL Bias Terminal
47	DSL2	I/O	DSL Loop Filter
48	PLL2	I/O	PLL Loop Filter
49	VCOF	I/O	VCO Loop Filter Terminal
50	AVDD2	I	Power Supply Input (For Analog Circuit)
51	AVSS2	I	GND (For Analog Circuit)
52	EFM	O	EFM Signal Output (Not Used, Open)
53	PCK	O	PLL Extraction Clock Output (Not Used, Open) (fPCK= 4.3218 MHz during Normal Playback)
54	VCOF2	I/O	VCO loop Filter for 33.8688 MHz Conversion Terminal for 16.9344 Mhz Crystal mode, Must use other Circuit)
55	SUBC	O	Sub-Code Serial Data Output (Not Used, Open)
56	SBCK	I	Clock Input for Sub-Code Serial Data)
57	VSS	I	GND
58	X1 IN	I	Crystal Oscillating Circuit Input (f= 16.9344 MHz)
59	X2 OUT	O	Crystal Oscillating Circuit Input (f= 16.9344 MHz)
60	VDD	I	Power Supply Input (For Oscillating Circuit)
61	BYTCK	O	Byte Clock Output (Not Used, Open)
62	/CLDCK	O	Sub-Code Frame Clock Signal Output (fCLDCK= 7.35 kHz During Normal Playback)
63	FCLK	O	Crystal Frame Clock Signal Output (fCLDCK= 7.35 kHz)
64	IPFLAG	O	Interpolation Flag Output ("H": Interpolation) (Not Used, Open)
65	FLAG	O	Flag Output (Not Ised, Open)

Pin No.	Mark	I/O	Function
66	CLVS	O	Spindle Servo Phase Synchronizing Signal Output ("H": CLV, "L": Rough Servo) (Not used, Open)
67	CRC	O	Sub-Code CRC Checked Output ("H": OK, "L" NG) (Not Used, Open)
68	DEMPH	O	De-Emphasis DN Signal Output ("H":ON)
69	RESY	O	Frame Re-synchronizing Signal Output
70	IOSEL	I	Mode Switching Terminal
71	/TEST	I	Test Input
72	AVDD1	I	Power Supply Input (For Analog Circuit)
73	OUTL	O	Left Channel Audio Signal Output
74	AVSS1	I	GND
75	OUTR	O	Right Signal Audio Signal Output
76	RSEL	I	RF Signal Polarity Assignment Input (at "H" level, RSEL= "H", at "L" SEL= "L")
77	IOVDD	I	5V Supply
78	PSEL	I	Test terminal (Connected to GND)
79	MSEL	I	SMCK Oscillating Frequency Designation Input ("L": 4.2336 MHz, "H" 8.4672MHz)
80	SSEL	I	SUBQ Output Mode Select ("H": Q-Code Buffer Mode)

11.8. IC703 (BA5948FPE2) FOCUS COIL / TRACKING COIL / TRAVERSE MOTOR / SPINDLE MOTOR DRIVE

Pin No.	Mark	I/O	Function
1	IN2	I	Motor Driver 92) Input
2	PC2	I	Turntable Motor Drive Signal ("L":ON)
3	IN1	I	Motor Driver (1) Input
4	PC1	—	Traverse Motor Drive Signal ("L":ON)
5	N.C.	—	No connection
6	N.C.	—	No connection
7	N.C.	—	No connection
8	N.C.	—	No connection
9	PGND1	—	Ground Conenction (1) for Driver
10	PVCC1	I	Power Supply (1) for Driver
11	D1-	O	Motor Driver (1) reverse - action output
12	D1+	O	Motor Driver (1) forward - action output
13	D2-	O	Motor Driver (2) reverse - action output

Pin No.	Mark	I/O	Function
14	D2+	O	Motor Driver (1) forward - action output
15	D3-	O	Motor Driver (3) reverse - action output
16	D3-	O	Motor Driver (3) forward - action output
17	D4-	O	Motor Driver (4) reverse - action output
18	D4+	O	Motor Driver (4) forward - action output
19	PVCC2	I	Power Supply (2) for Driver
20	PGND2	—	Ground Connection(2) for Driver
21	N.C.	NC	No Connection
22	N.C.	NC	No Connection
23	N.C.	NC	No Connection
24	N.C.	NC	No Connection
25	VCC	I	Power Supply Terminal
26	VREF	I	Reference Voltage Input
27	IN4	I	Motor Driver (4) Input
28	IN3	I	Motor Driver (3) Input

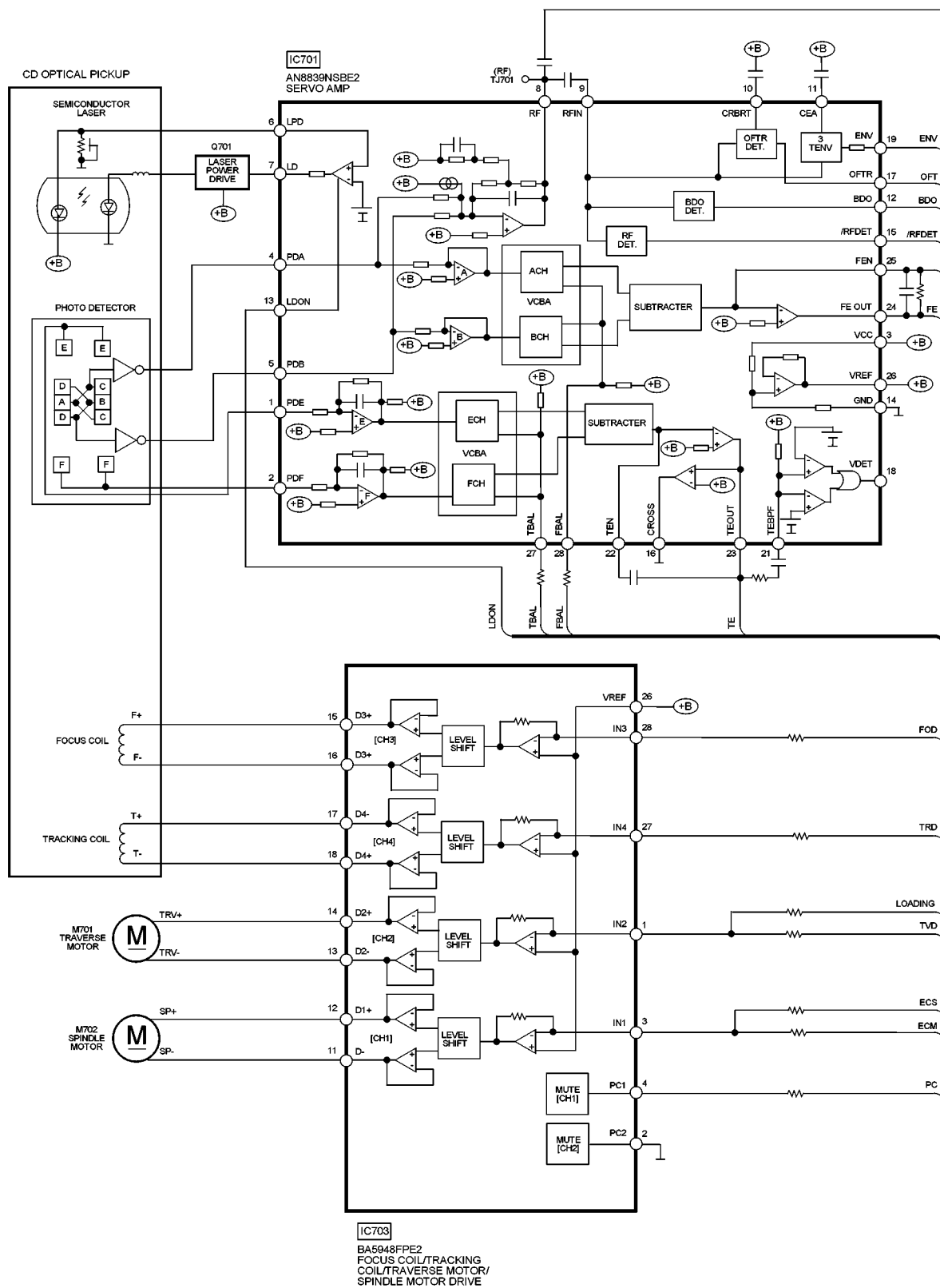
11.9. IC801 (M30622MC4A3F) SYSTEM MICROPROCESSOR

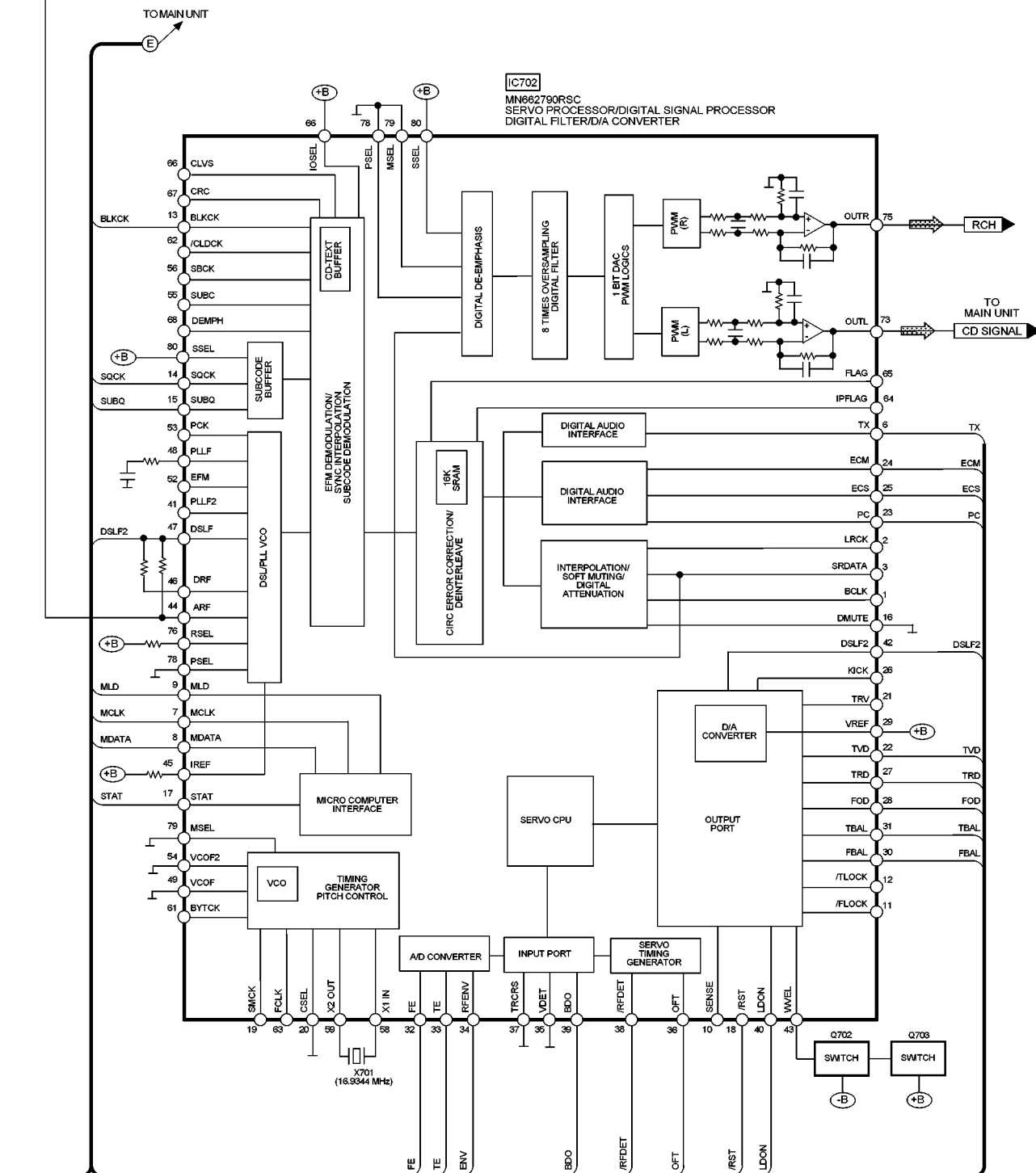
Pin No.	Mark	I/O	Function
1	CD_MLD	O	CD command load output
2	CD_RST	O	CD reset output
3	CD_MCLK	O	CD command clock output
4	CD_MDATA	O	CD command data output
5	CD_RESTSW	I	CD limit detect sw input
6	MBP1	O	Control output (H=ON)
7	MBP2	O	Control output (H=ON)
8	BYTE	—	VSS (GND)
9	CNVss	AD I	VSS (GND)
10	OSC IN	I	Sub clock input (32.768 kHz)
11	OSC OUT	O	Sub clock input (32.768 kHz)
12	/RESET	I	System reset input
13	XOUT	O	Main clock output (8.0 MHZ)
14	Vss	—	GND (0V)
15	XIN	I	Main clock input (8.0 MHZ)
16	VCC	—	Power supply (5V)
17	NMI	I	Connect to VCC, external interrupt I/P
18	HALT	I	AC failure detect input
19	CD_BLKCL	I	Block clock input
20	RMT	I	Remocon input
21	CD_STAT	I	CD status input
22	A-DATA	O	Audio IC (Rohm BD3861) control data output
23	A_CLK	O	Clock for audio IC (Rohm BD3861)
24	N.C.	O	no connection
25	RDS_RDCL	I	RDS clock input
26	RDS_RDDA	I	RDS data input
27	N.C.	O	No connection
28	MD_CLK	O	MD serial clock output
29	MD_DATA OUT	O	MD serial data output
30	MD_DATA IN	I	MD serial data input
31	N.C.	O	No connection
32	SUBQ/SRDT	I	CD subcode clock input
33	SQCK/SCLK	O	CD subcode clock output
34	LOAD SW	I	MD load (TRG) SW (H:SW off)
35	MD_LINK OUT	O	MD portable link serial data output

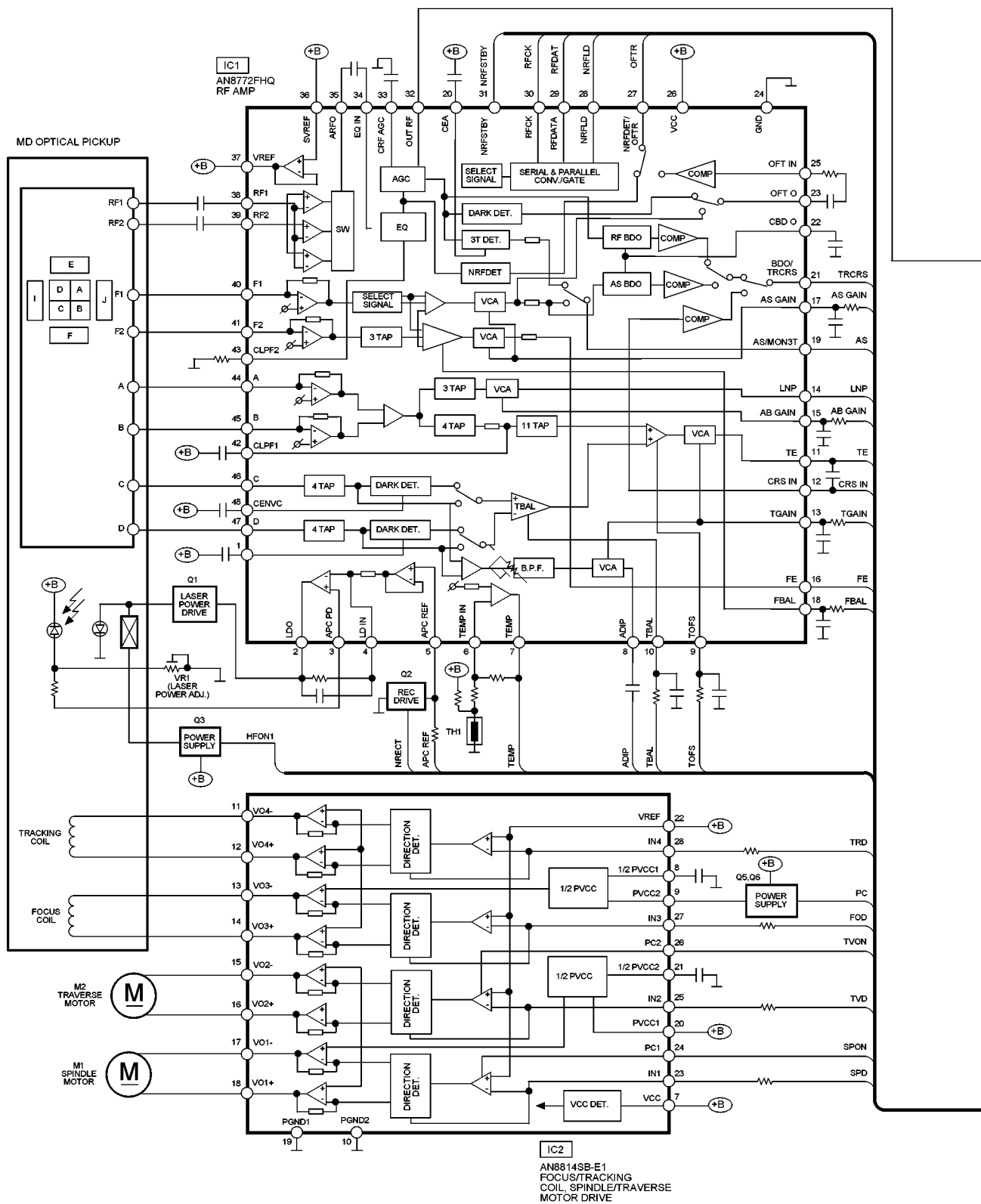
Pin No.	Mark	I/O	Function
36	MD_LINK IN	I	MD portable link serial data input
37	CR02 PB	O	CR02 tape play back (active H)
38	MD_REQ	O	MD request output
39	MD_SYS RST	O	MD system reset output (L:Reset)
40	MD_CS	I	MD chip select input
41	CRT	I/O	CR Timer
42	EE_DATA	O	E2prom data output (Normally 'L')
43	EE-CLK	O	E2prom clock output (Normally 'L')
44	EE_CS	O	E2prom CS (Normally 'L')
45	STEREO	I	Tuner stereo det input
46	SD	I	Tuner signal det input
47	DO	I	Tuner if count data input
48	MOTOR_H	O	Deck motor (active :H)
49	PL_H	O	Deck plunger (active :H)
50	PLLCLK	O	Tuner PLL clock output
51	PLLDAT	O	Tuner PLL data output
52	PLLCE	O	Tuner PLL chip enable
53	BP	O	Beat proof for AM
54	CR02	I	Chrome tape detecting switch
55	REC_H	O	Deck record control output (active: H)
56	DMT	O	Tape mute output (L: Mute on)
57	LCLOSE_H	O	CD close tray low speed (Active : H)
58	LOPEN_L	O	CD open tray low speed (Active : L)
59	CD_OPEN SW	I	CD open switch input
60	CLOSE_L	O	CD close tray normal (Active : L)
61	OPEN_H	O	CD open tray normal (Active : H)
62	VCC	—	Power supply 5.0V
63	N.C.	O	No connection
64	Vss	—	GND (0V)
65	N.C.	O	No connection
66	TAPE_EJ	I	Tape eject key
67	N.C.	O	No connection
68	N.C.	O	No connection

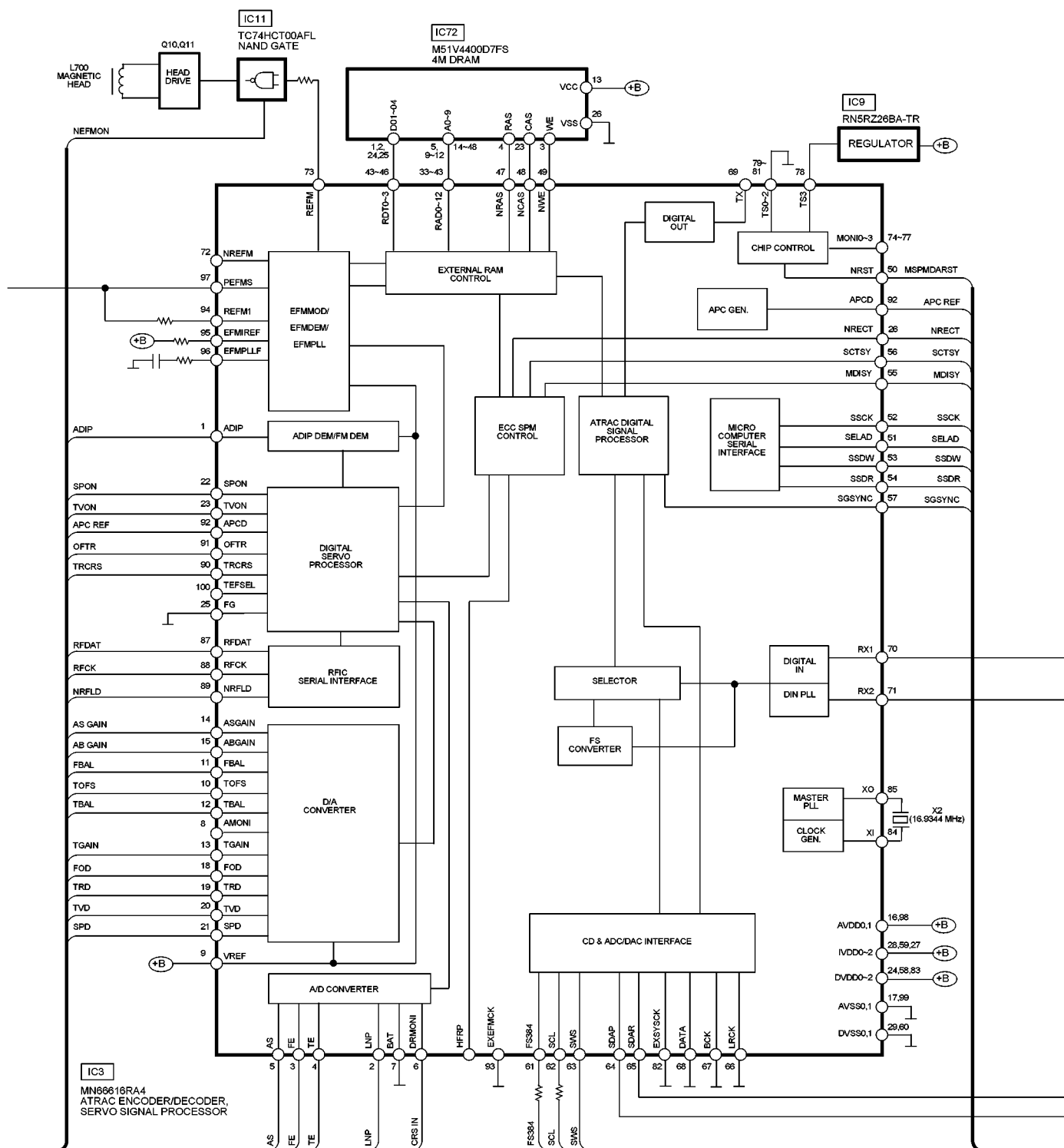
Pin No.	Mark	I/O	Function
69	LD_SPD	I	CD loading speed select
70	S/W_RESET	I	Micro_P RESET
71	LCD_RST	O	Rest output
72	LCD_CS	O	Chip select output
73	LCD_CLK	O	Clock output
74	LCD_DATA	O	Data output to the driver
75	EXP_DATA	O	Exp 1C control data out
76	EXP_CLK	O	Exp 1C control clock output
77	VOL_S1	I	Vol jog S1 input
78	VOL_S2	I	Vol jog S2 input
79	N.C.	O	No connection
80	N.C.	O	No connection
81	S.V.	O	Sound virtualiser
82	N.C.	O	No connection
83	Dimmer	O	Dim LCD backlight and turn off all LEDs
84	PCNT1	O	Power control output 1 (secondary side)
85	PCNT2	O	Power control output 2 (secondary side)
86	MUTE A	O	Muting output A
87	N.C.	O	No connection
88	HP_SW	I	Headphone jack SW
89	N.C.	O	No connection
90	AD1	A-D	Key input 1
91	AD2	A-D	Key input 2
92	MK_IN1	A-D	Tape mecha condition input 1 (Half/Rec_F/REC_R/Mode)
93	MK_IN2	A-D	Tape mecha condition input 2 (Photo/TPS)
94	DC_DET	A-D	DC detect input
95	N.C.	O	No connection
96	AVSS	—	Analog power supply input
97	SETUP TUNER BAND	AD	Setup tuner band
98	VREF	I	reference voltage input
99	AVCC	—	Analog power supply input
100	N.C.	O	No connection

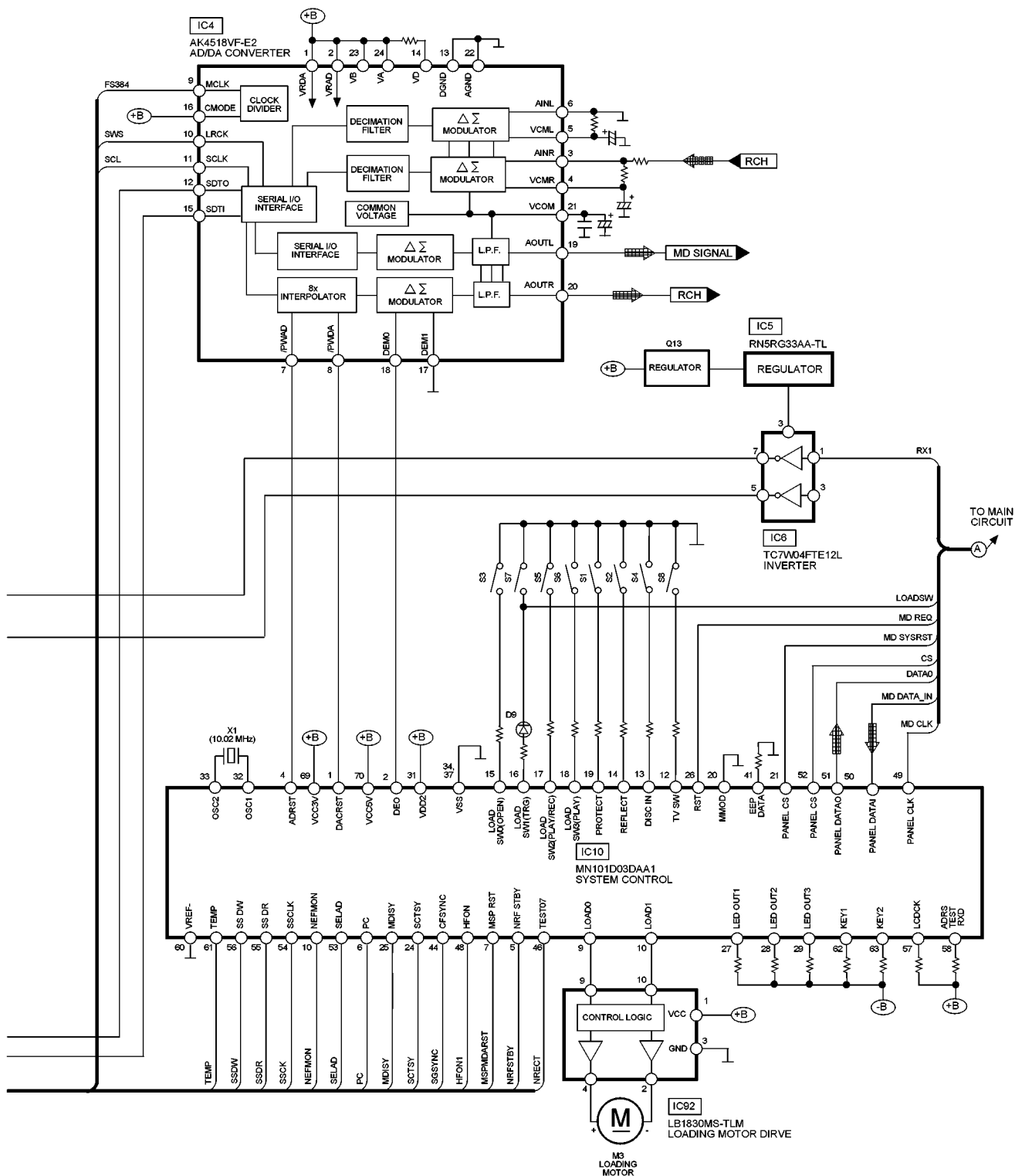
12 Block Diagram

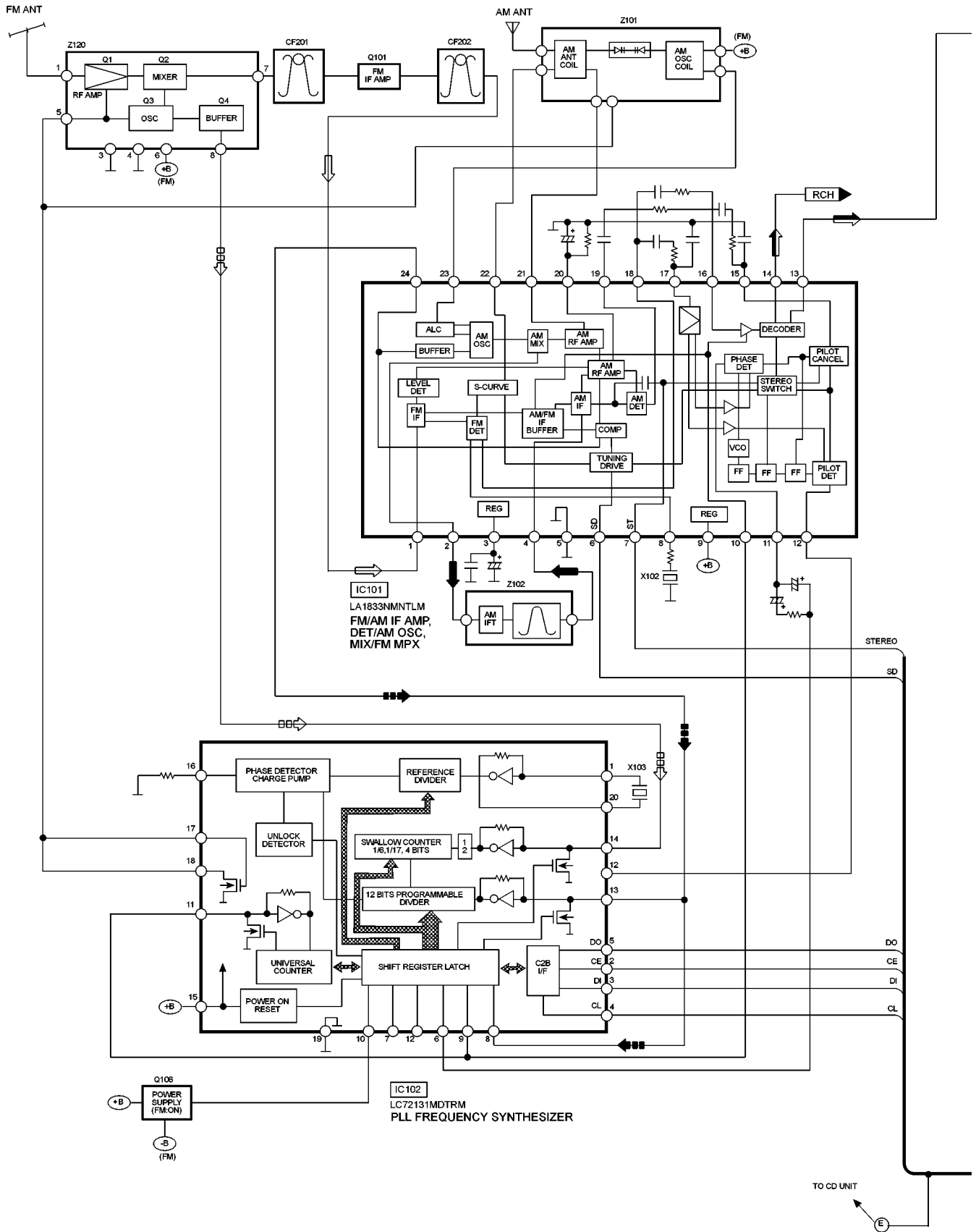




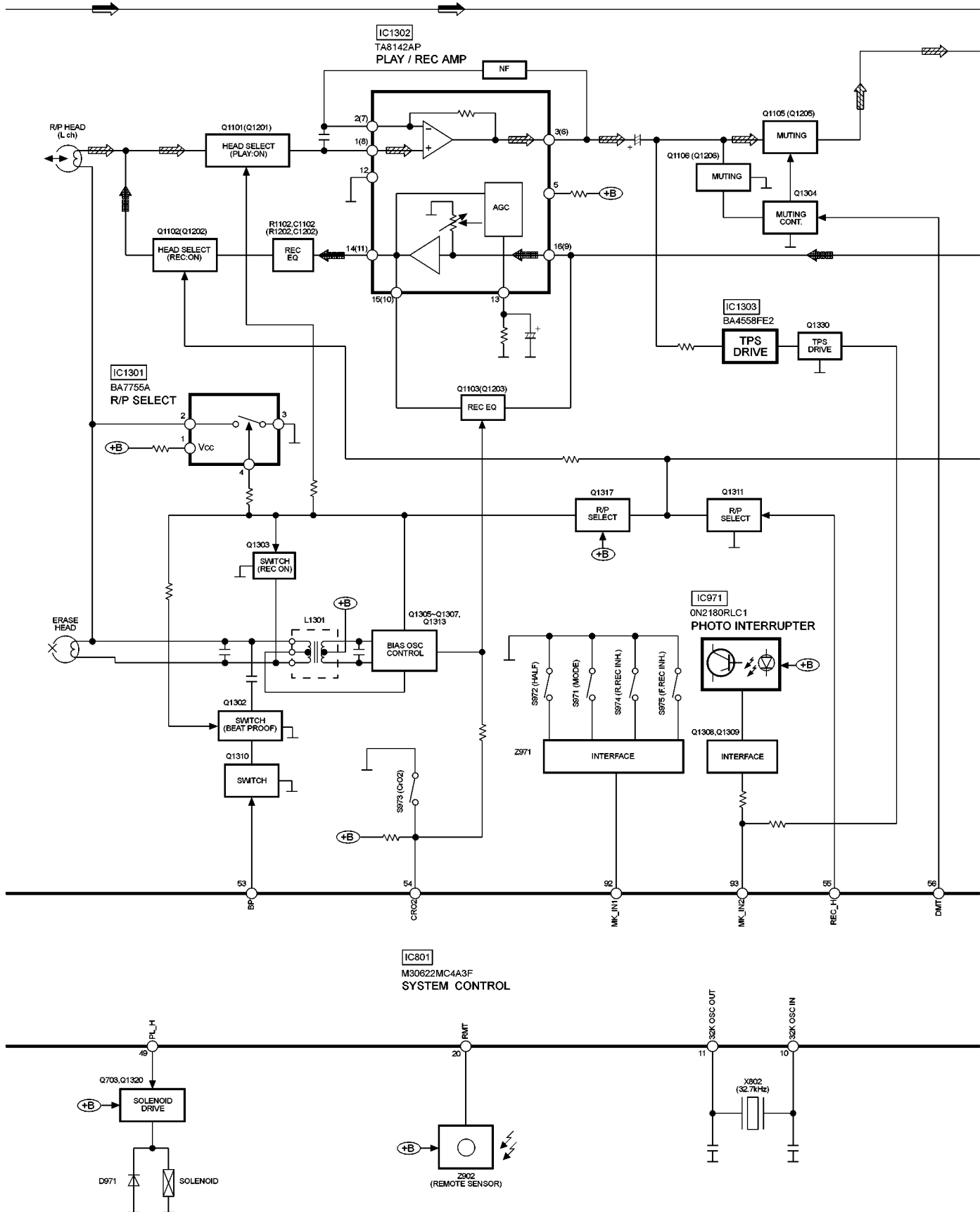


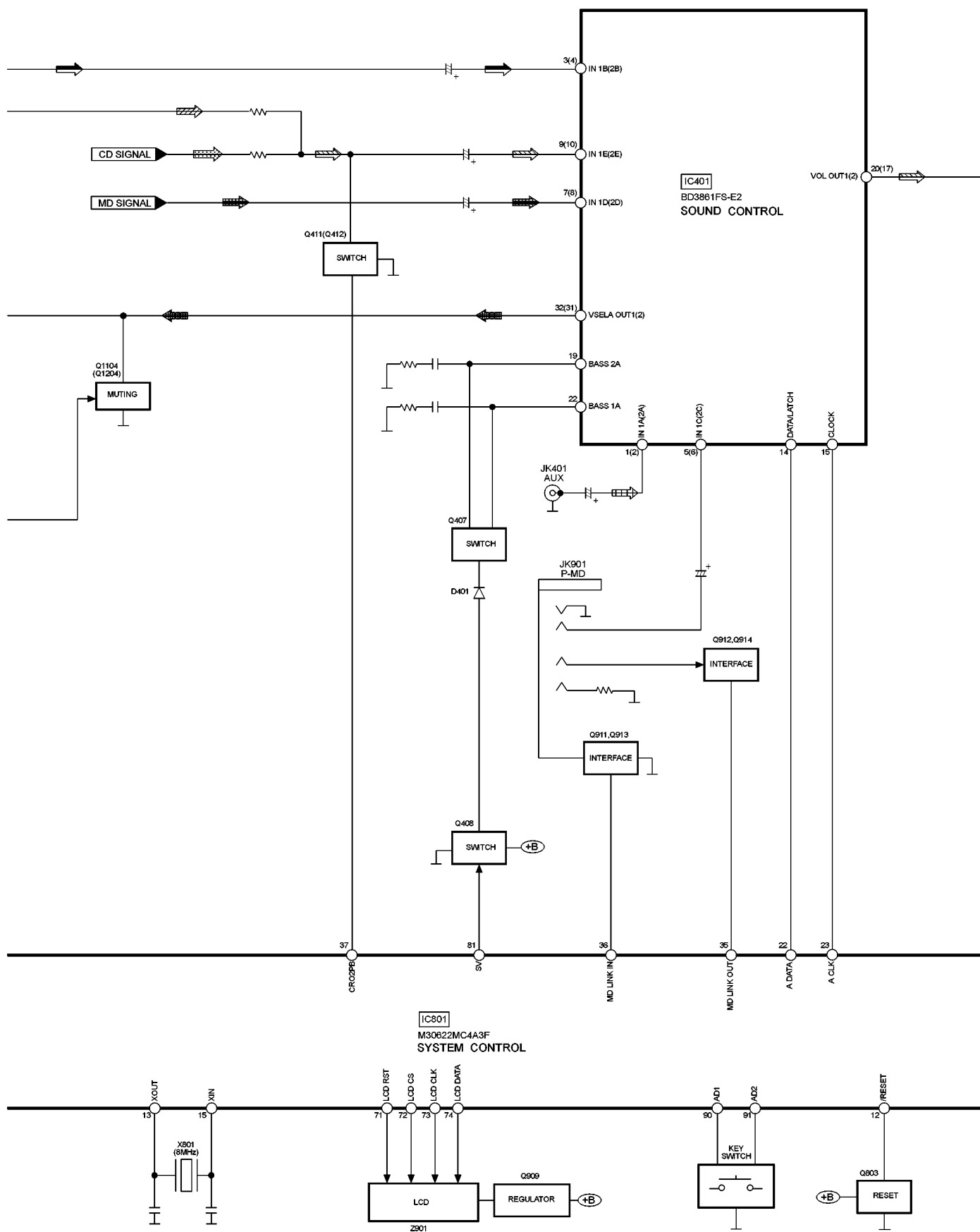


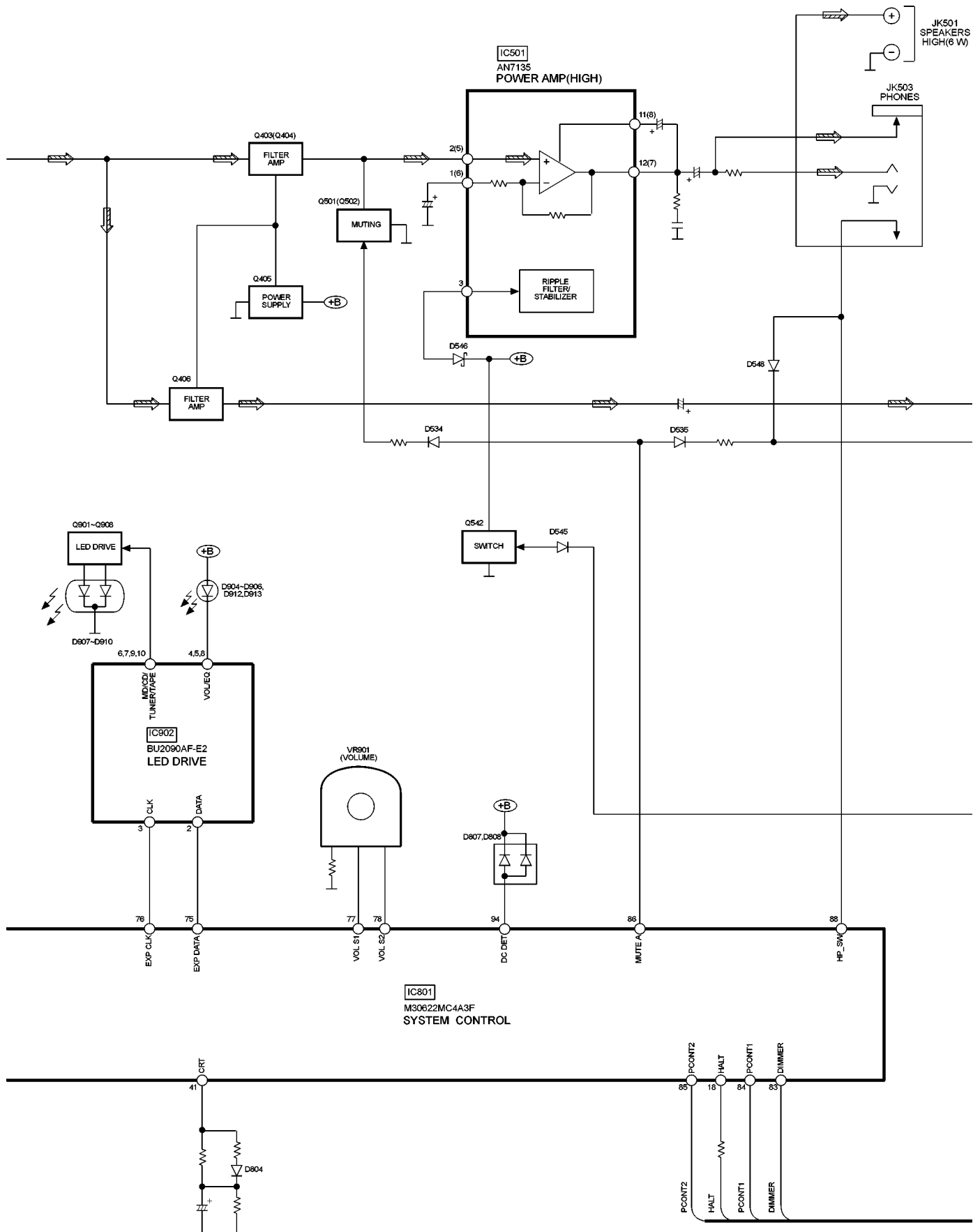






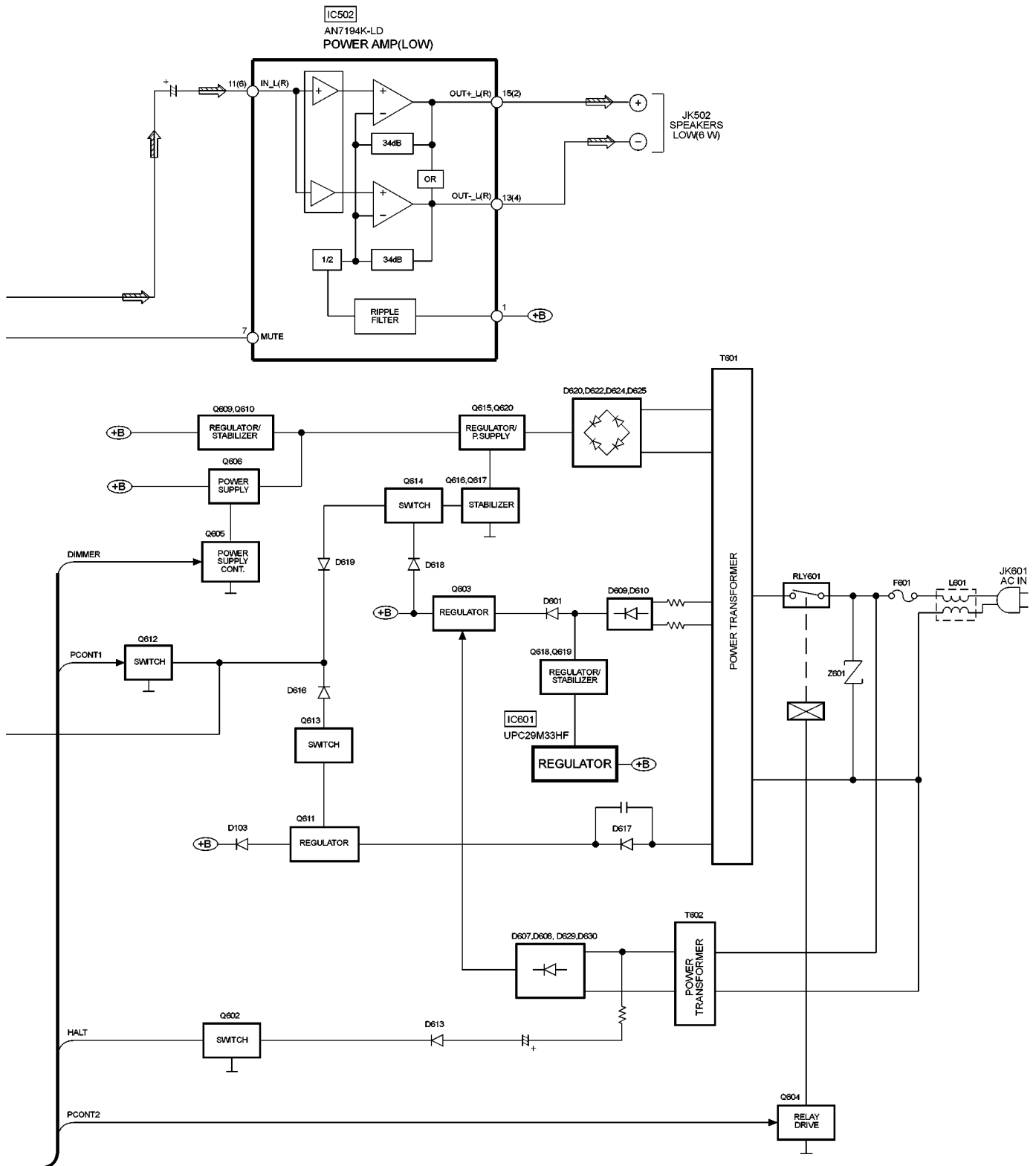






SIGNAL LINES

	: MAIN SIGNAL LINE		: CD SIGNAL LINE		: AM SIGNAL LINE		: PLAYBACK SIGNAL LINE
	: FM OSC SIGNAL LINE		: AM OSC SIGNAL LINE		: FM & AM SIGNALS LINE		: RECORDING SIGNAL LINE
	: FM SIGNAL LINE		: AUX SIGNAL LINE		: MD SIGNAL LINE		: MD REC SIGNAL LINE









13 Schematic Diagram








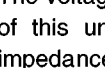
(All schematic diagrams may be modified at any time with the development of new technology)

Note :

S1	PROTECT detect switch
S2	REFLECT detect switch
S3	LOAD OPEN detect switch
S4	DISC IN detect switch
S5	LOAD PLAY / REC detect Switch
S6	LOAD PLAY detect Switch
S7	LOAD TRG detect switch
S8	Traverse detect switch
S701	Reset switch
S920	Power switch
S922	Display / Character switch
S923	Rec Mode switch
S924	MD and Tape Rec switch
S925	Tape Rec switch
S926	MD Rec switch
S932	CD Open / Close switch
S933	MD Eject switch
S934	Stop switch
S935	FF switch
S936	Rew switch
S937	Selector switch
S938	Sound EQ switch
S939	CD switch
S940	MD switch
S941	Tape switch
S942	Tuner switch
S950	Tape Eject switch
S971	Mode detect switch
S972	Leaf switch
S973	Leaf switch
S974	Leaf switch
S975	Leaf switch
S780	CD Open switch
VR1	Laser power adjust VR
VR901	Volume control VR

Signal line


	: +B line
	: -B line
	: FM/AM signal line
	: Main signal line
	: Playback signal line
	: Record signal line

	: FM signal line
	: AM signal line
	: AM OSC signal line
	: FM OSC signal line
	: AUX signal line
	: CD signal line
	: MD signal line
	: MD record signal line

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark	: Playback
<< >>	: Rec
(())	: CD
< >	: FM
()	: AM
(for MD Servo Circuit)	
()	: MD play [1kHz, L+R, 0dB]
< >	: MD rec. [1kHz, L+R, 0dB]
{ }	: MD

• Importance safety notice :

Components identified by  mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

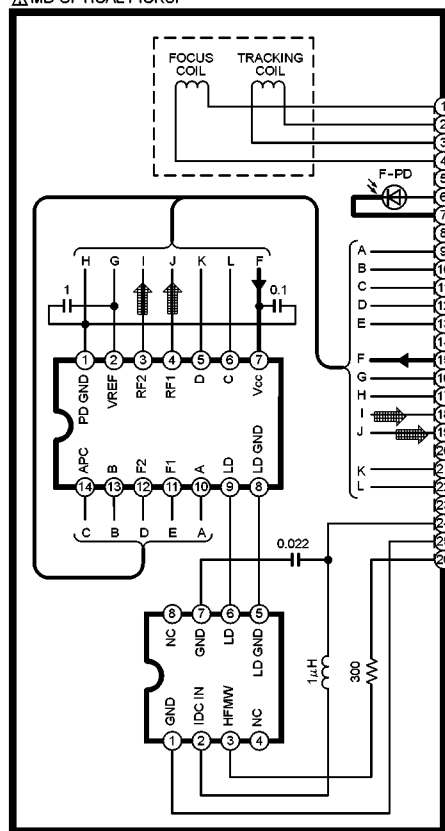
- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

SCHEMATIC DIAGRAM-1

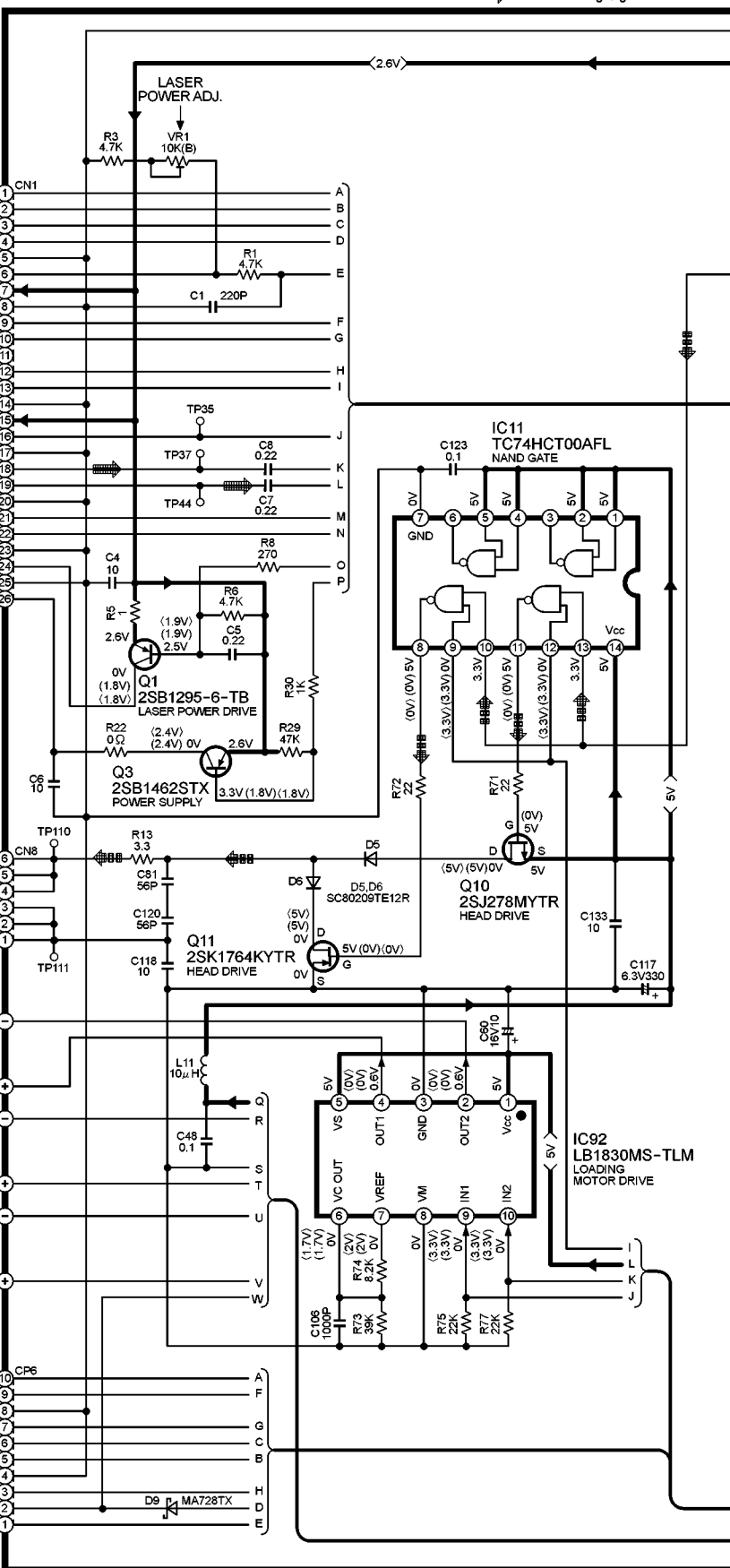
Note:

The number which noted at the connectors on the schematic diagram as "SCHEMATIC DIAGRAM-1" or "SCHEMATIC DIAGRAM-2" indicates the schematic diagram serial number located on the left corner in the schematic diagram.

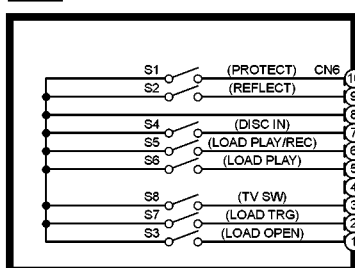
A MD OPTICAL PICKUP



A MD SERVO CIRCUIT



L MD SWITCH CIRCUIT

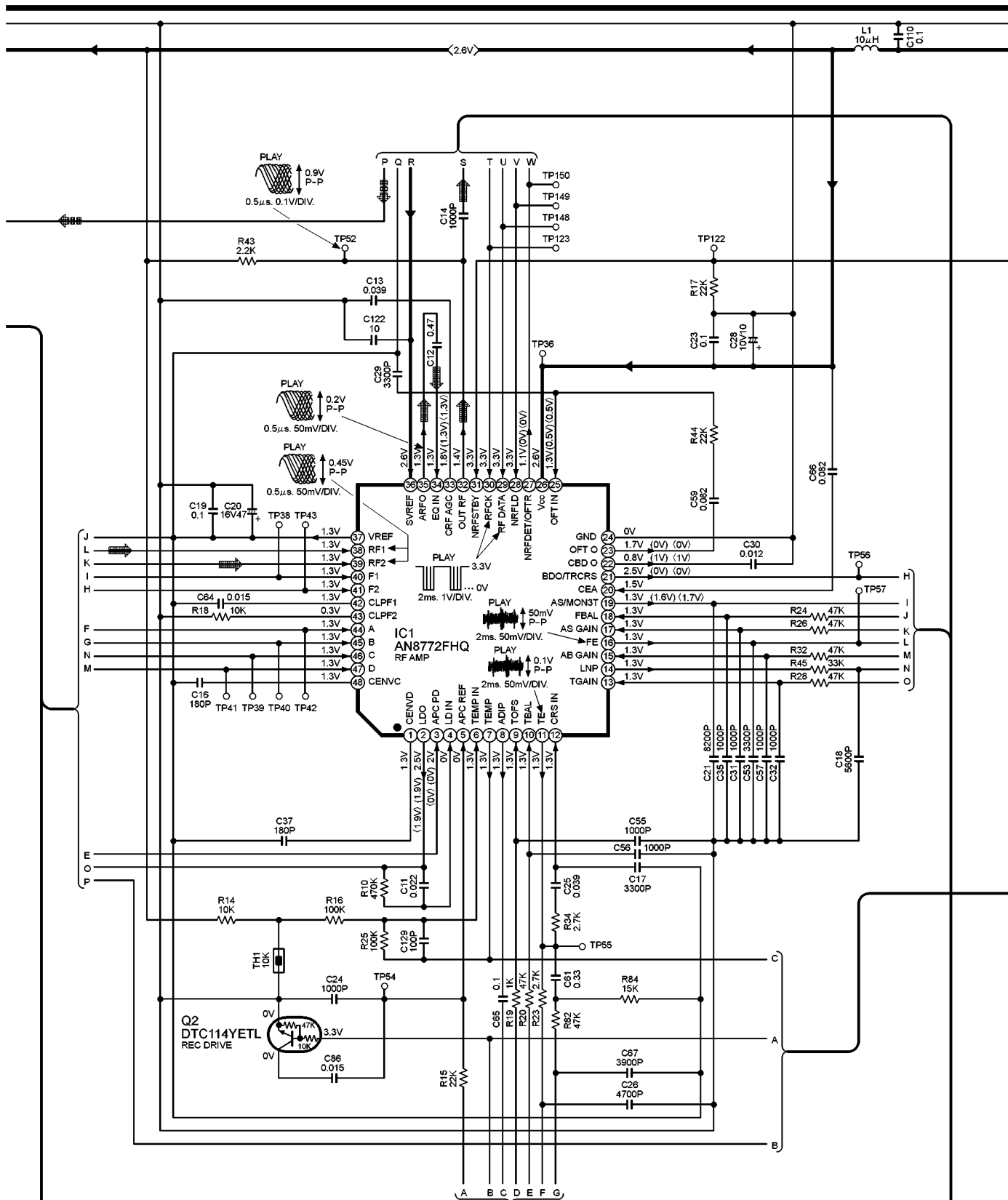


SCHEMATIC DIAGRAM-2

→ :+B Signal Line

▢ :MD Signal Line

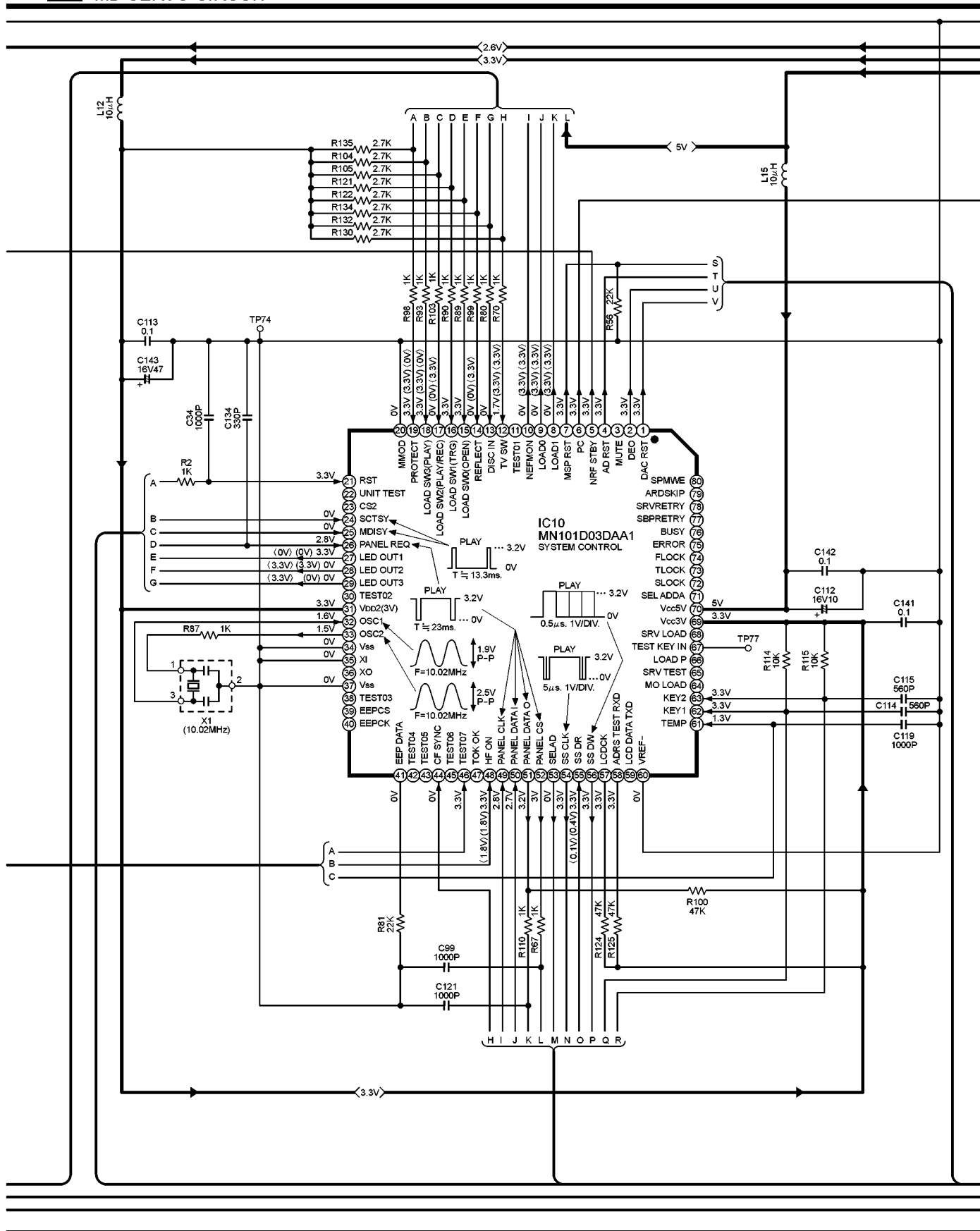
▢▢ :MD Recording Signal Line



SCHEMATIC DIAGRAM-3

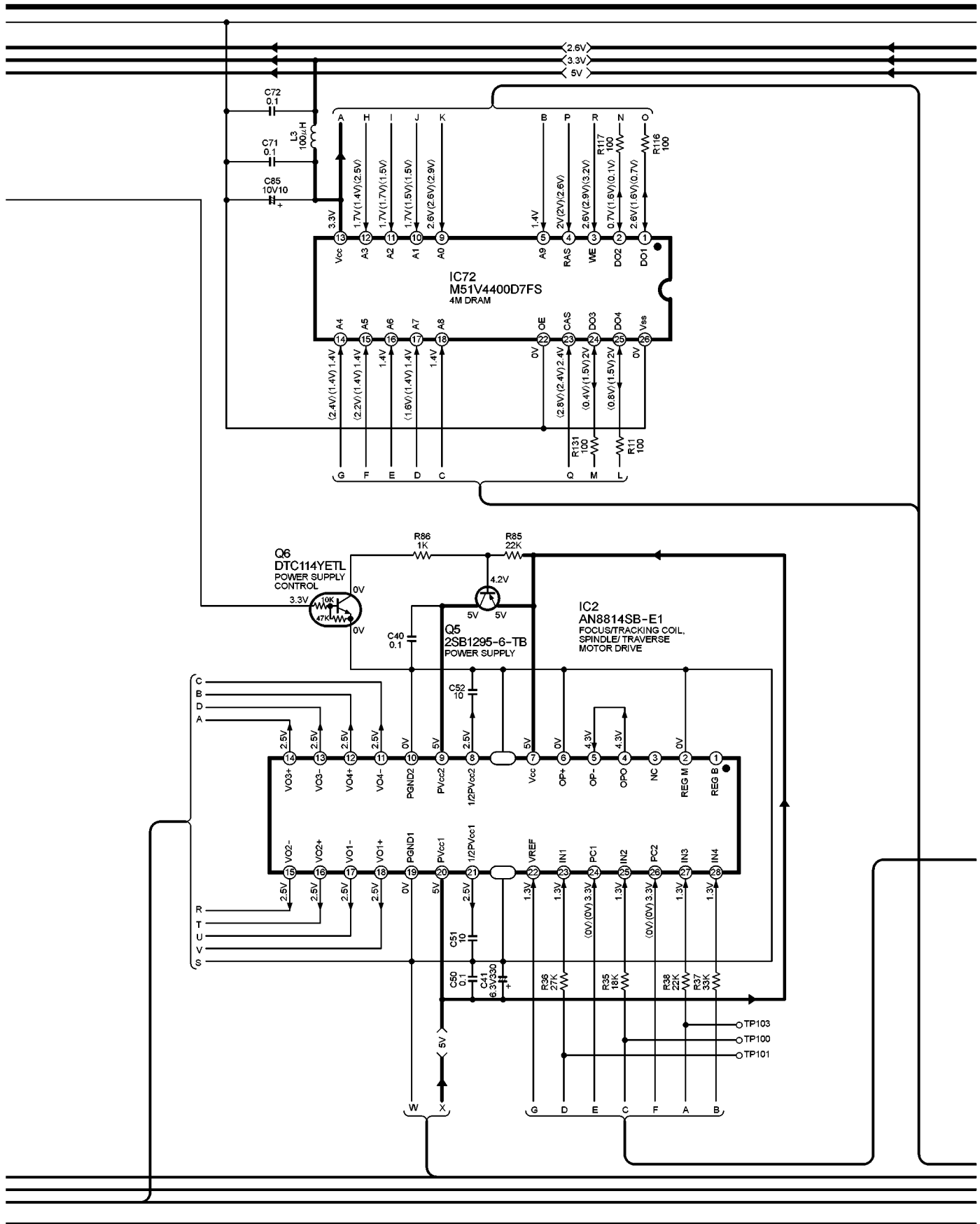
A MD SERVO CIRCUIT

→ :+B Signal Line



SCHEMATIC DIAGRAM-4

→ :+B Signal Line



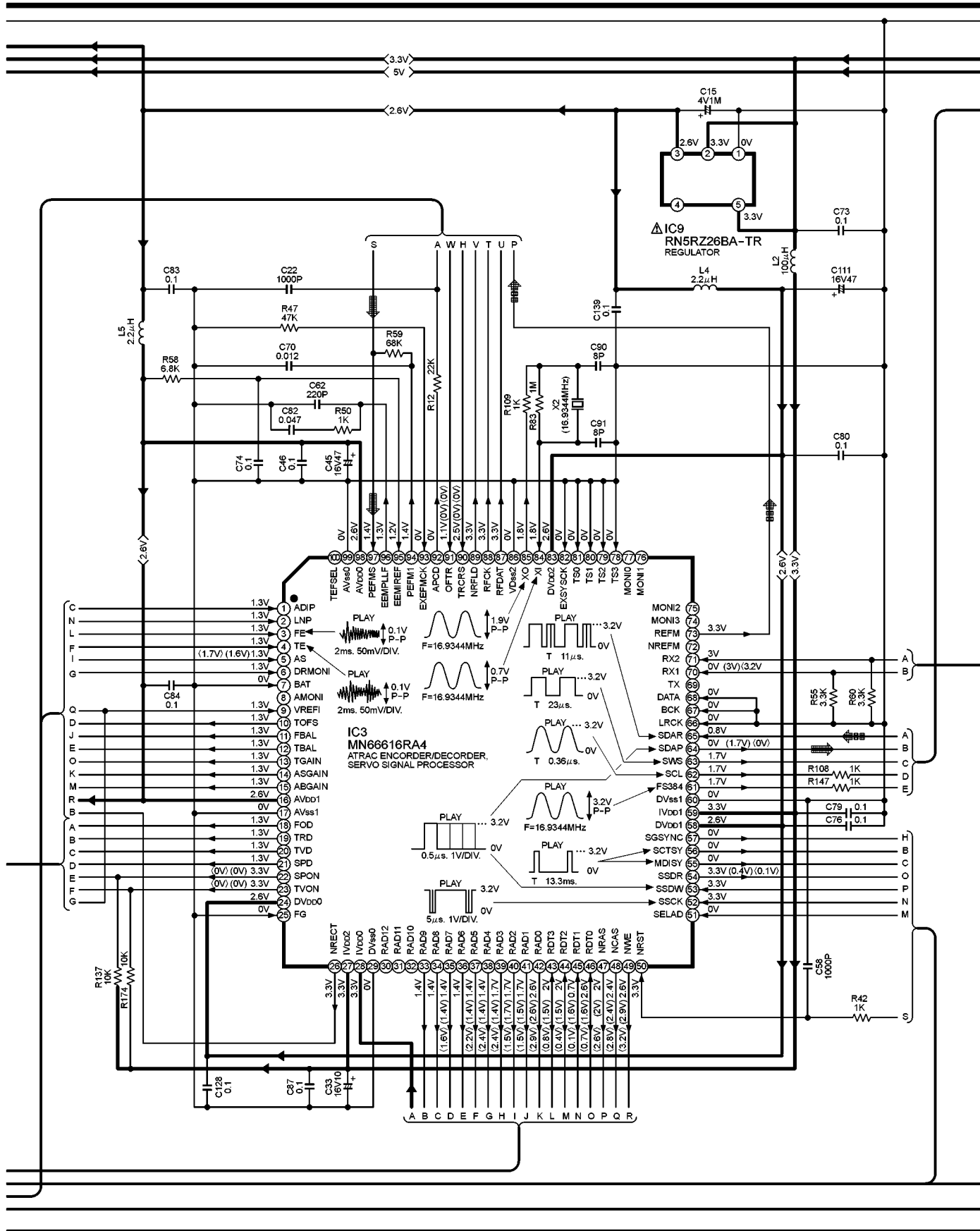
SCHEMATIC DIAGRAM-5

A MD SERVO CIRCUIT


→ :+B Signal Line


▤ :MD Signal Line

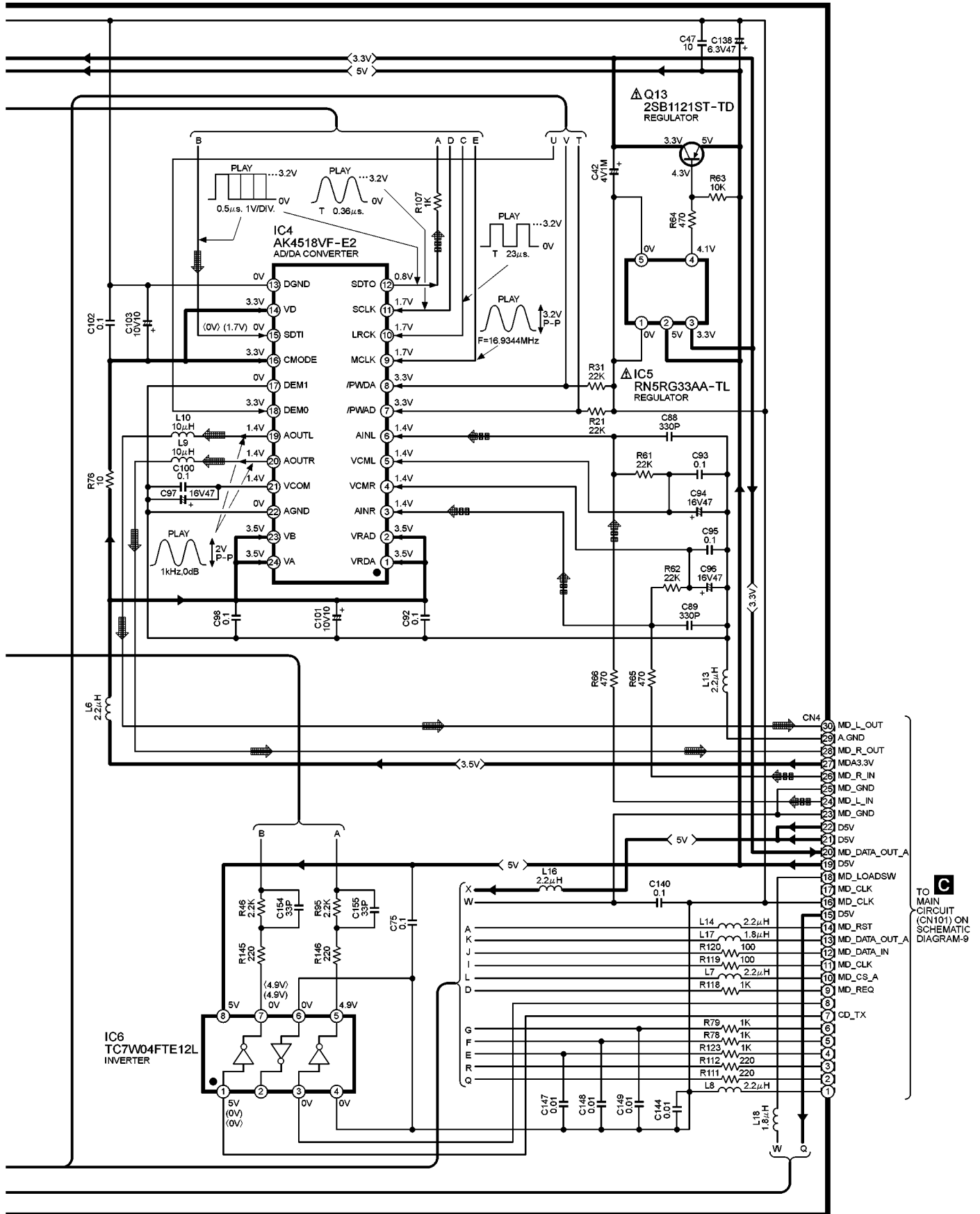
▤▤ :MD Recording Signal Line



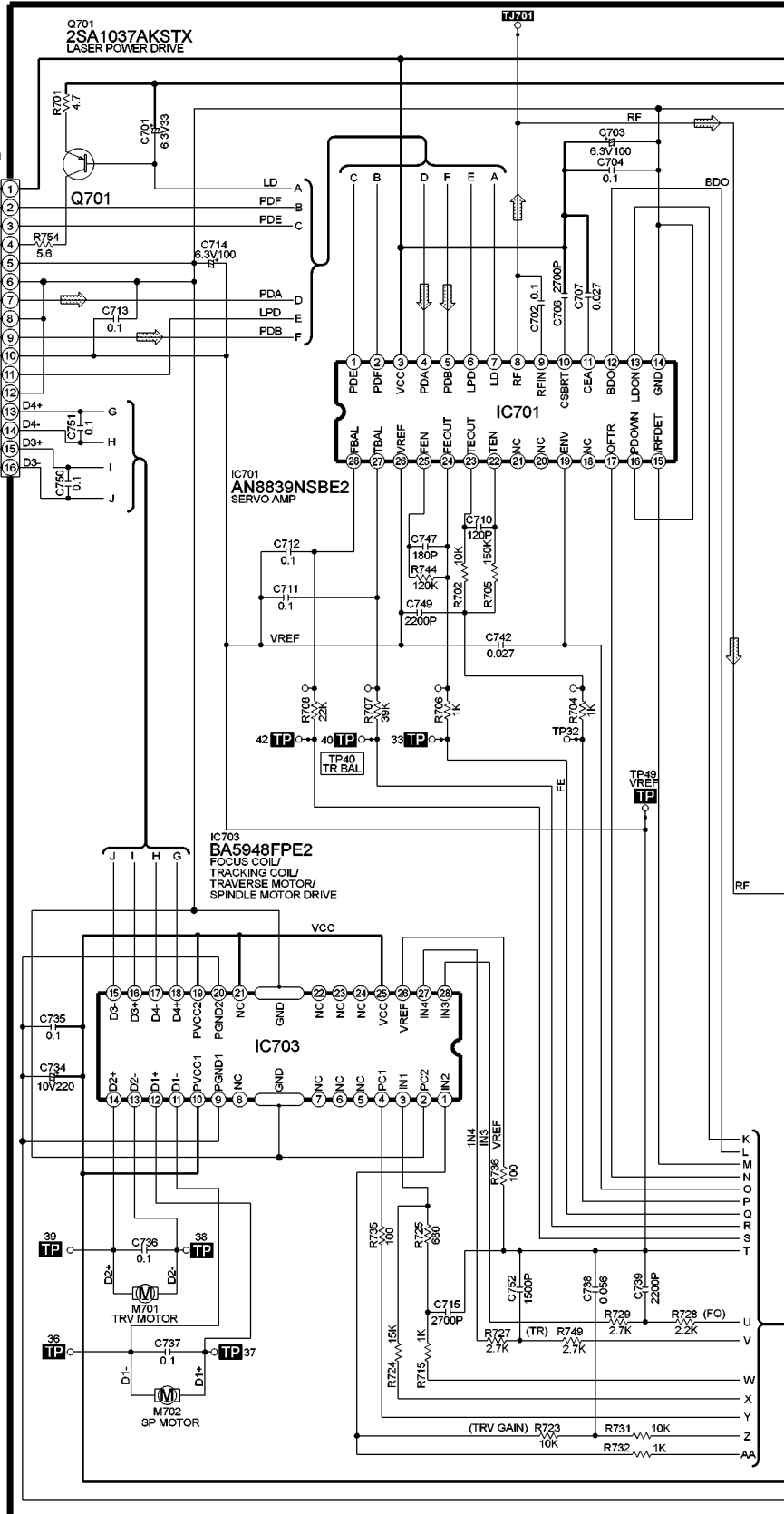
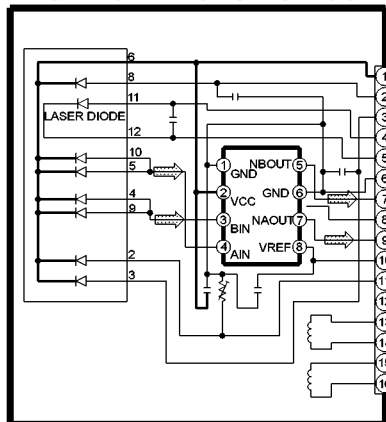
SCHEMATIC DIAGRAM-6

 :+B Signal Line

 :MD Signal Line

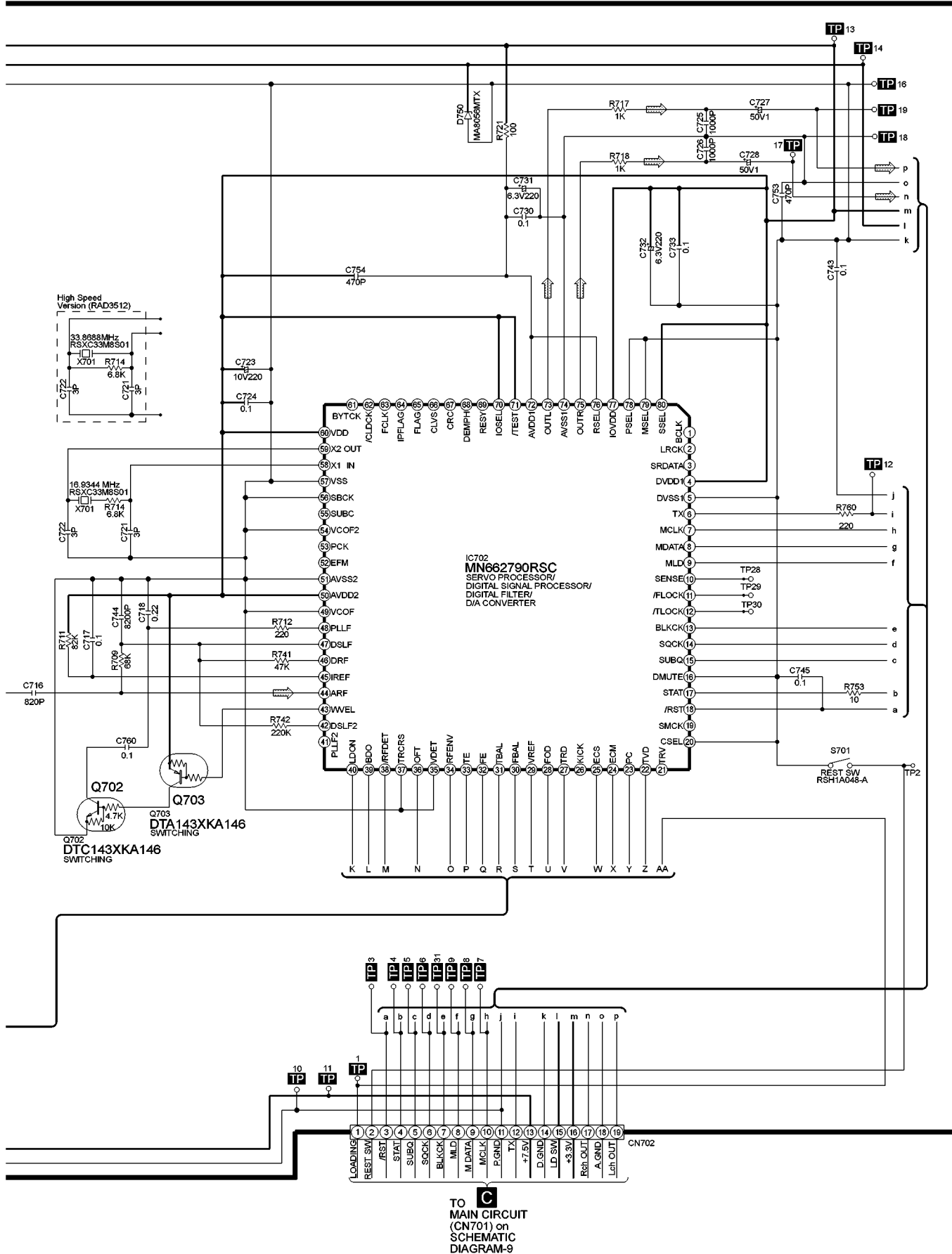
 : MD Recording Signal Line


SCHEMATIC DIAGRAM-7

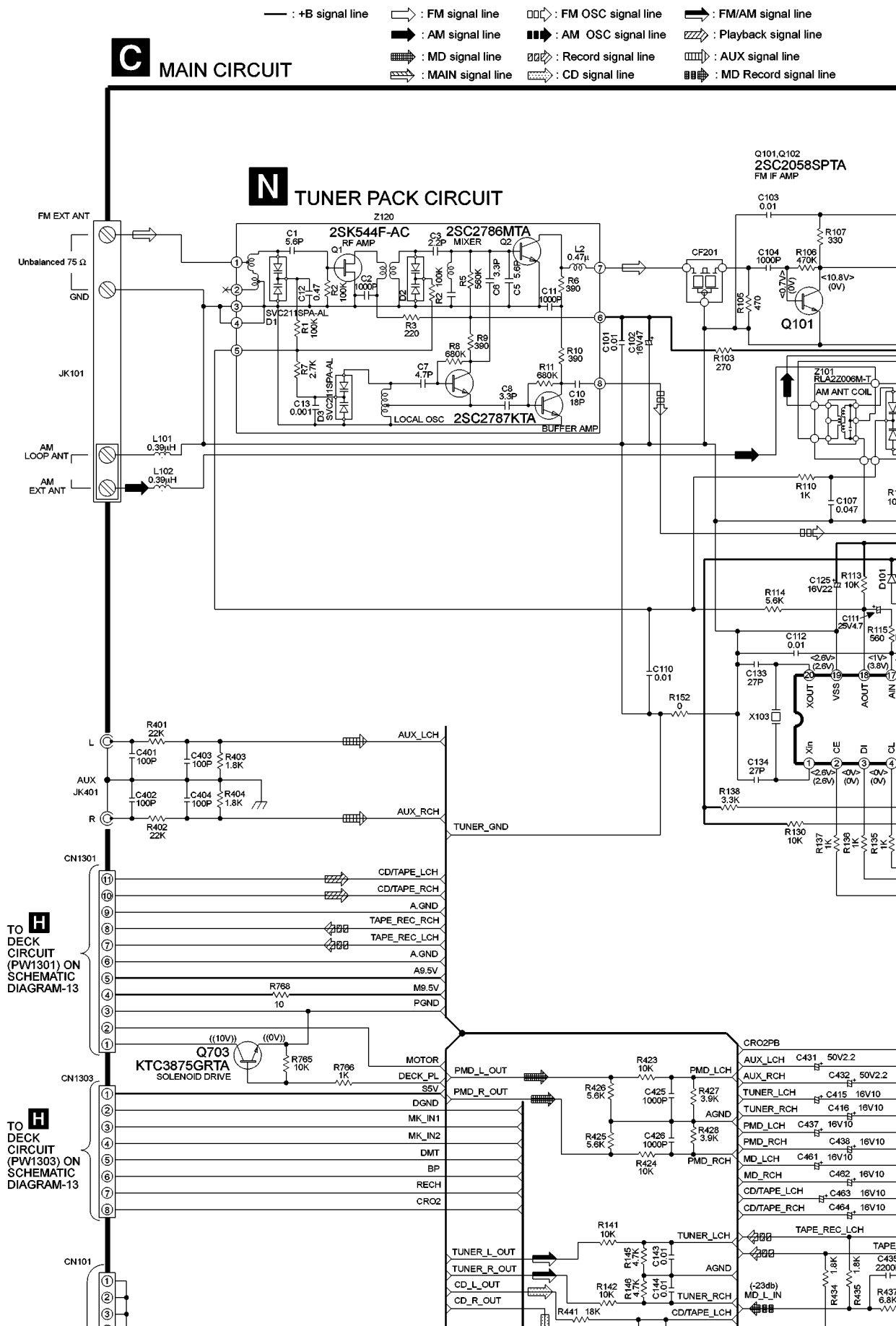
B CD SERVO CIRCUIT— : +B signal line  : CD Signal line**OPTICAL PICKUP CIRCUIT**

SCHEMATIC DIAGRAM-8

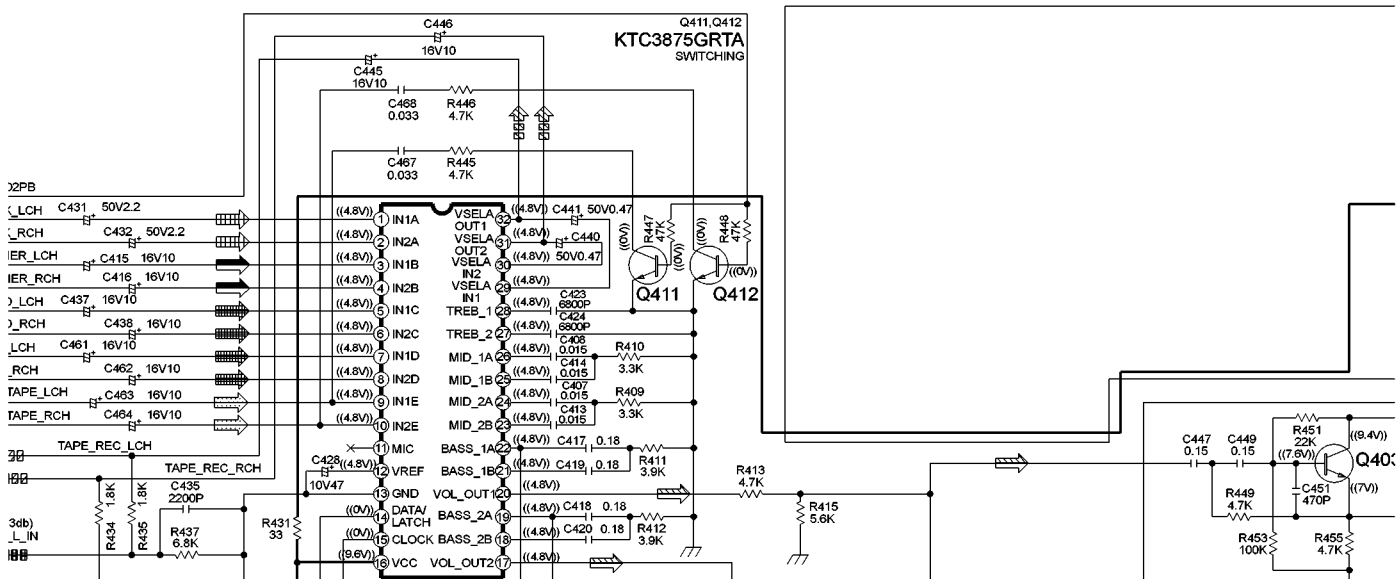
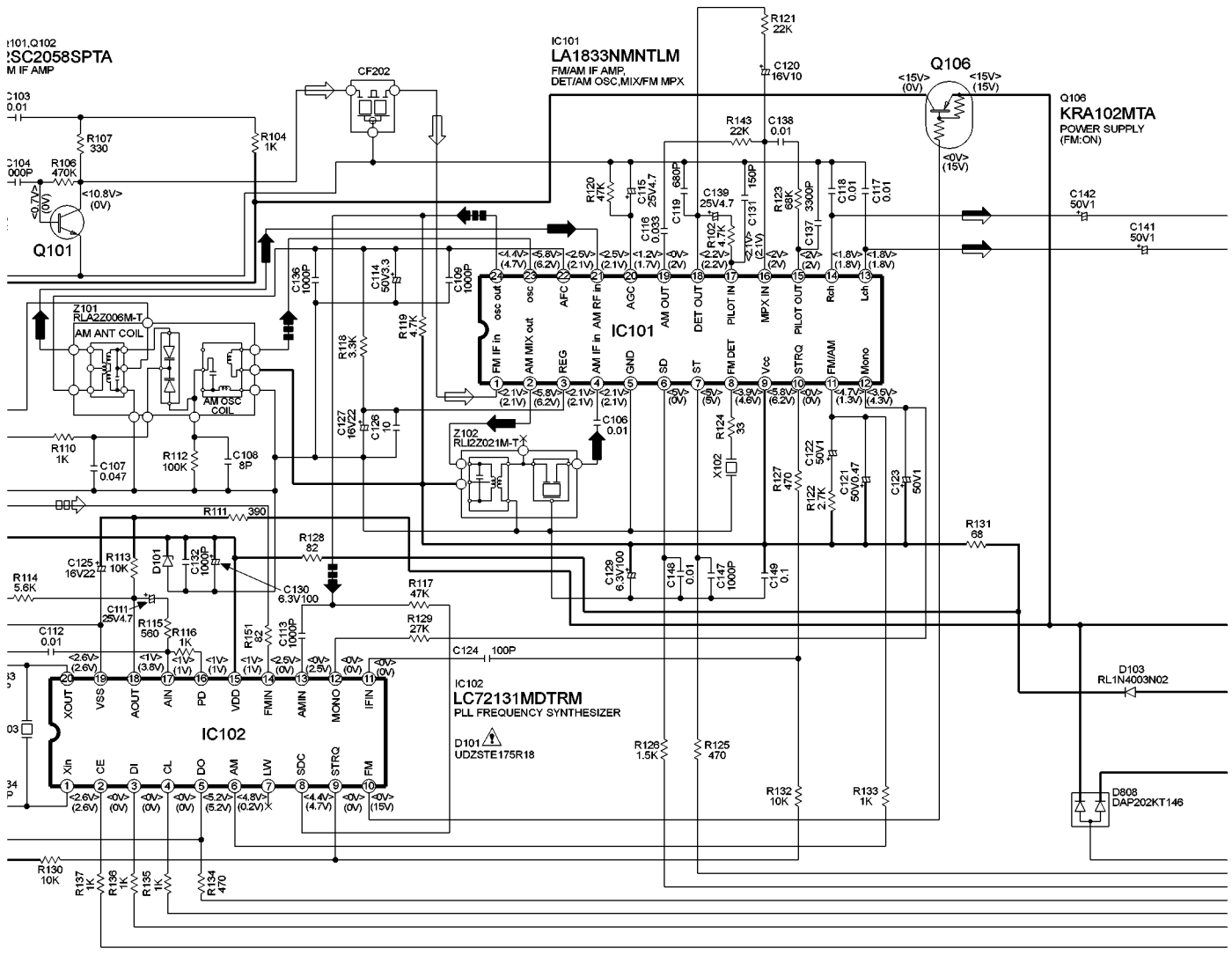
— : +B signal line  : CD Signal line

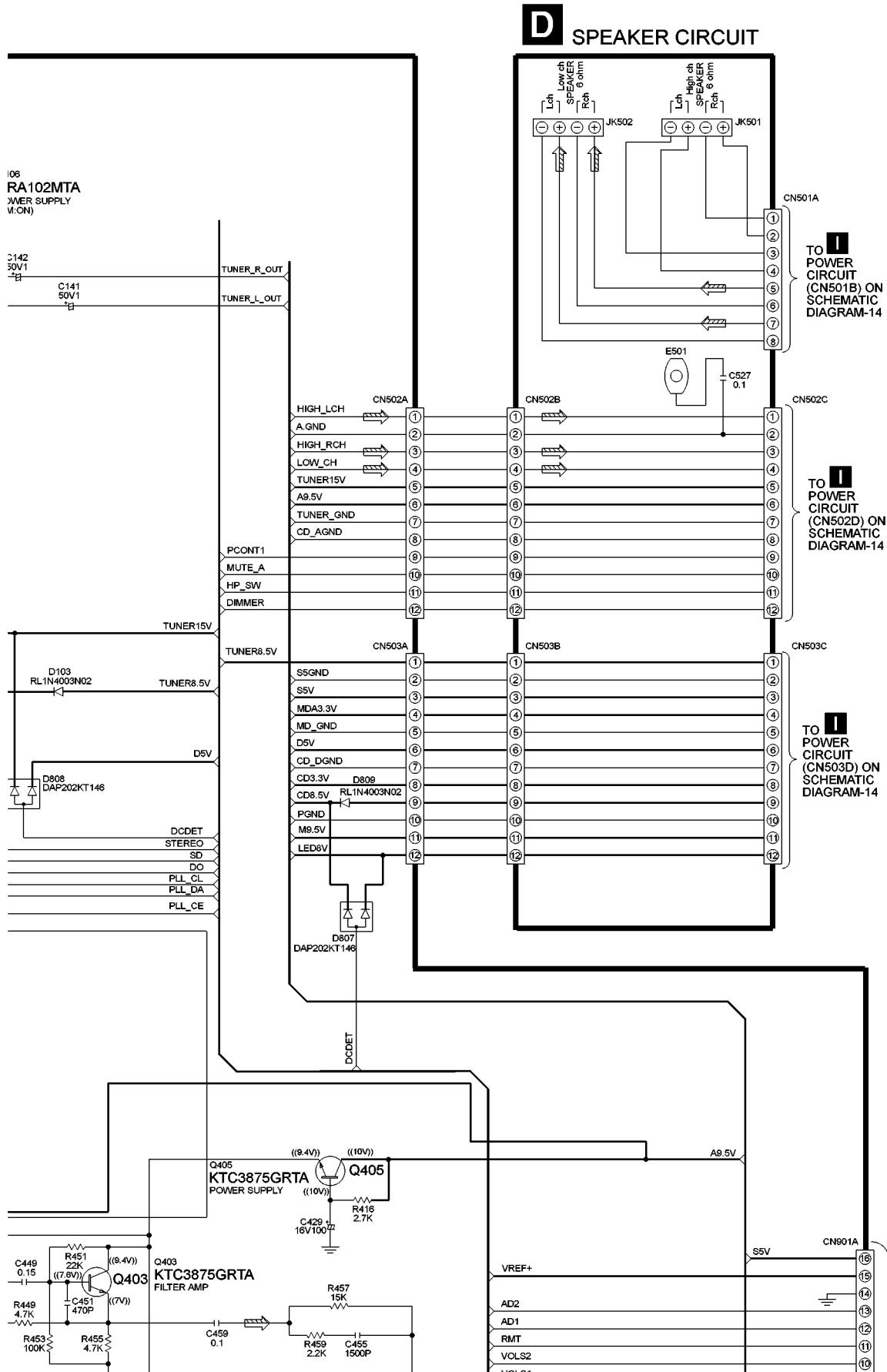


SCHEMATIC DIAGRAM-9



signal line
k signal line
jnal line
cord signal line



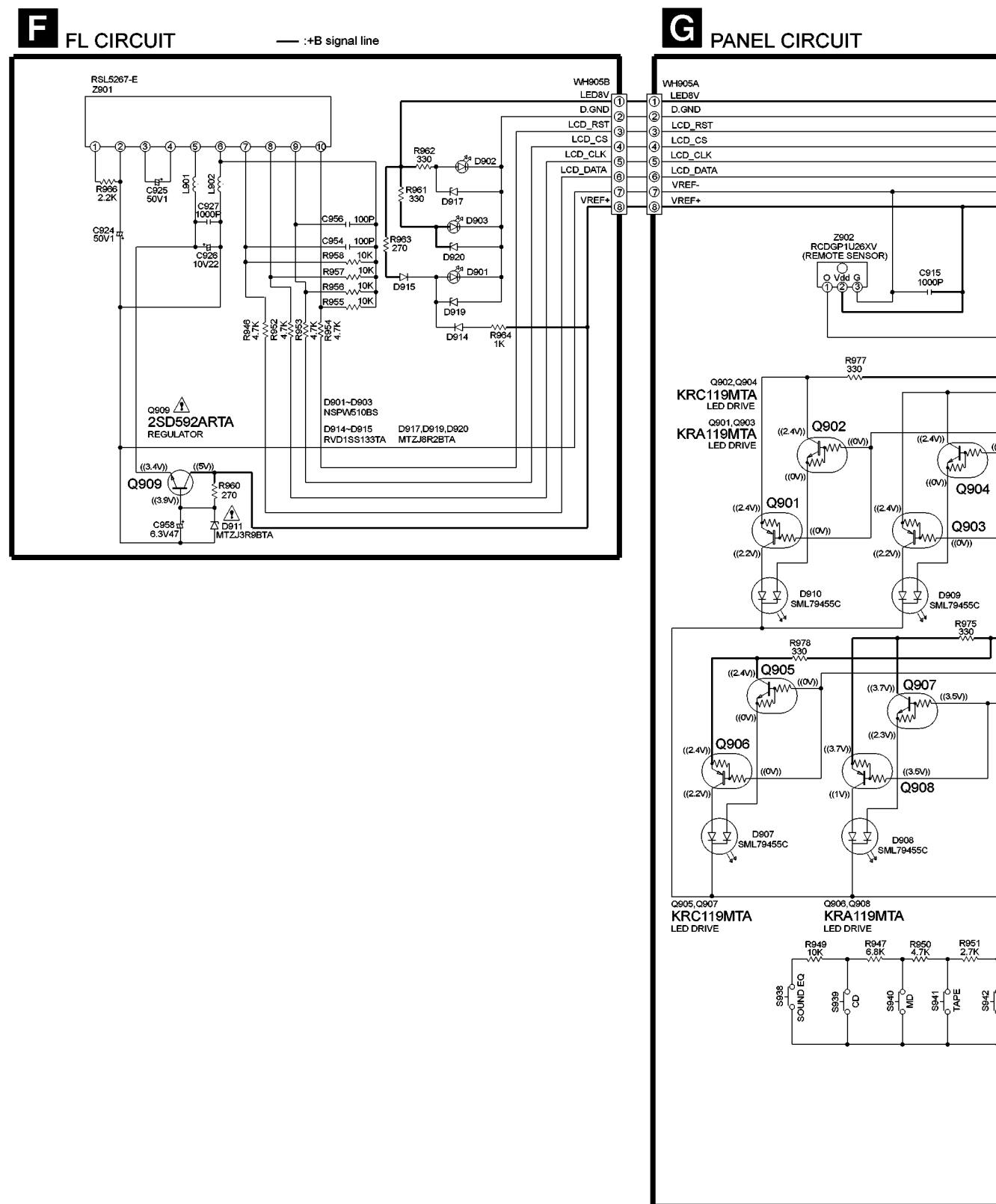


WH603

J

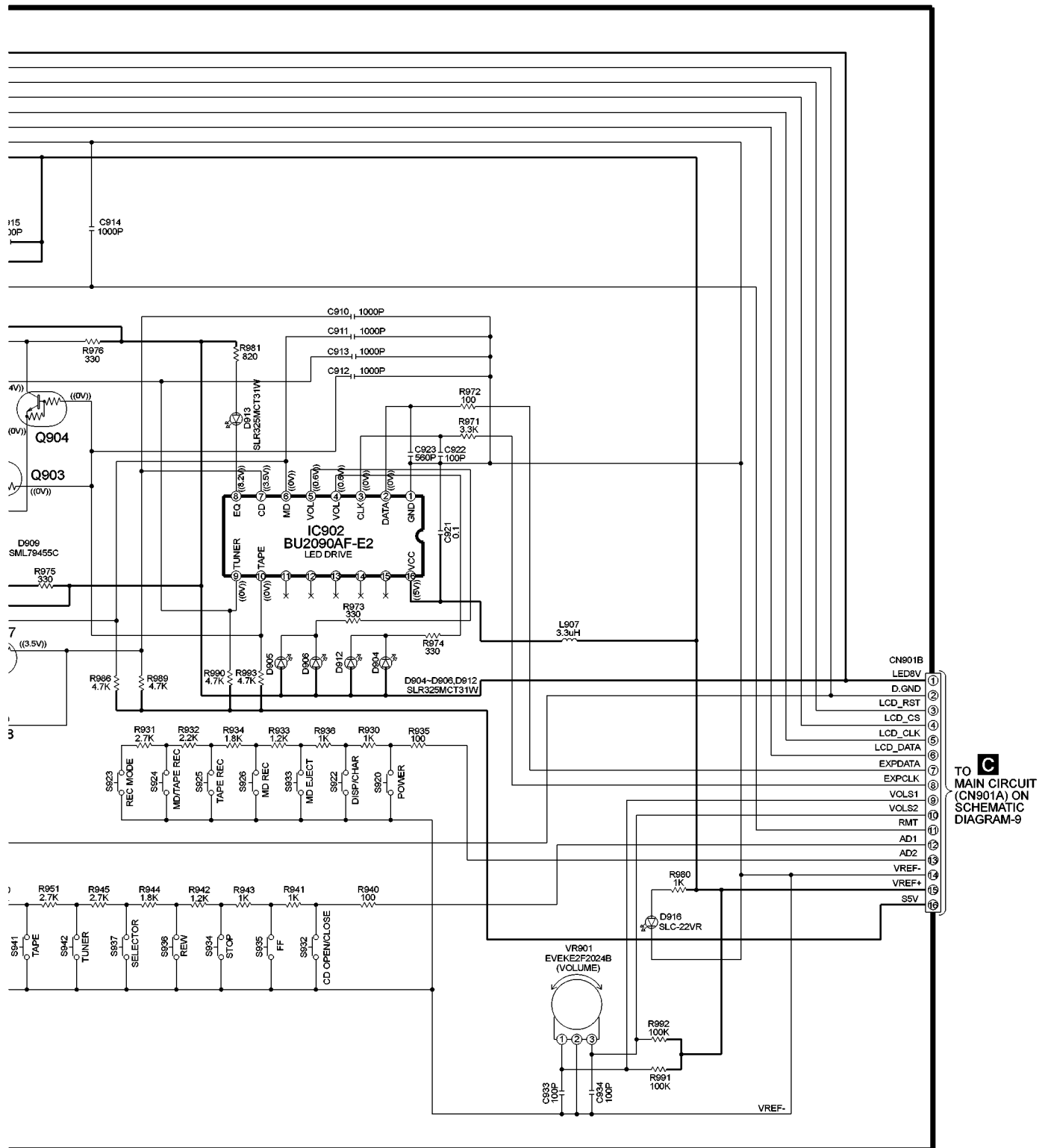
TO
AC TRANSFORMER
CIRCUIT (CN603) ON
SCHEMATIC
DIAGRAM-15

SCHEMATIC DIAGRAM-10

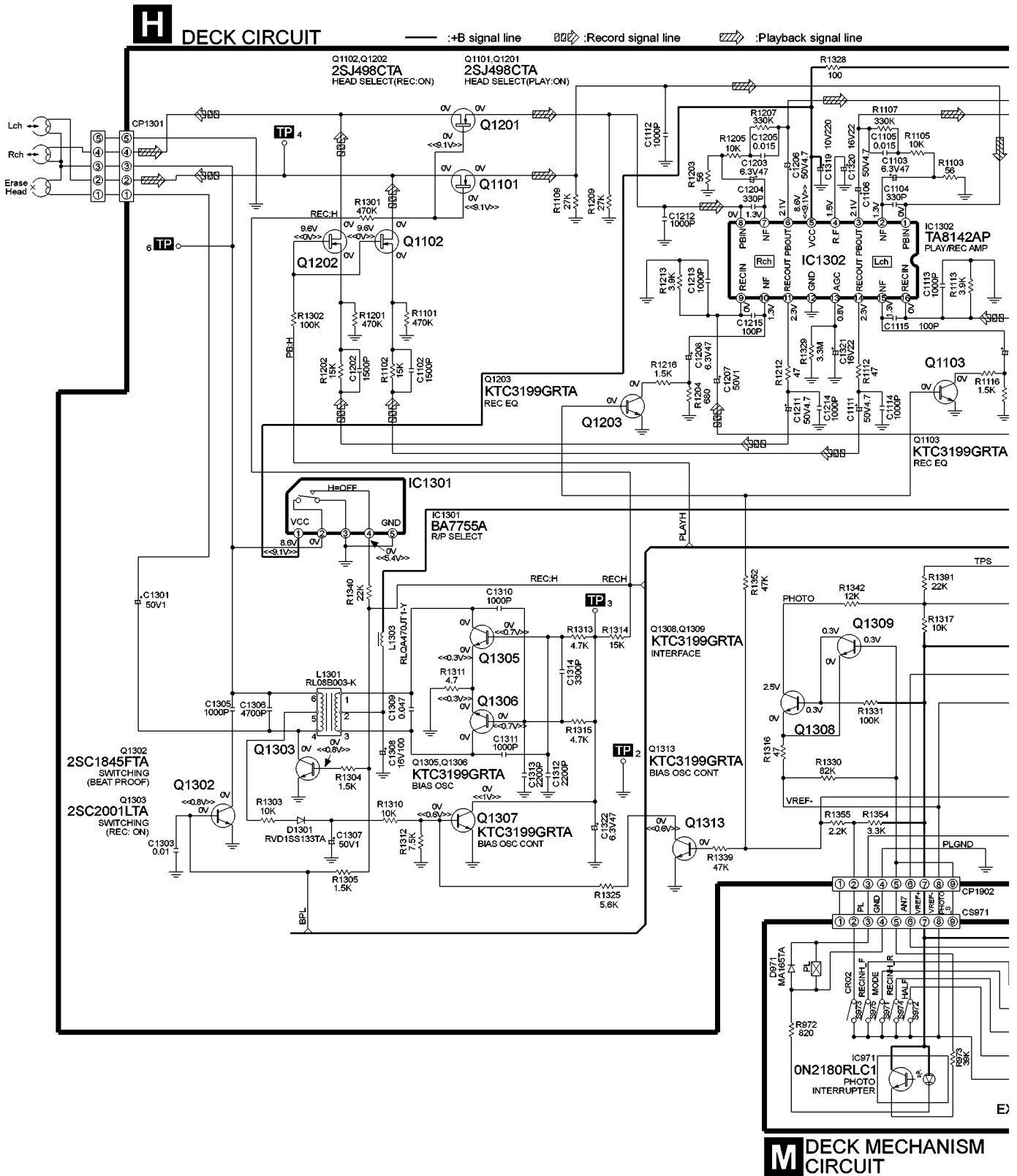


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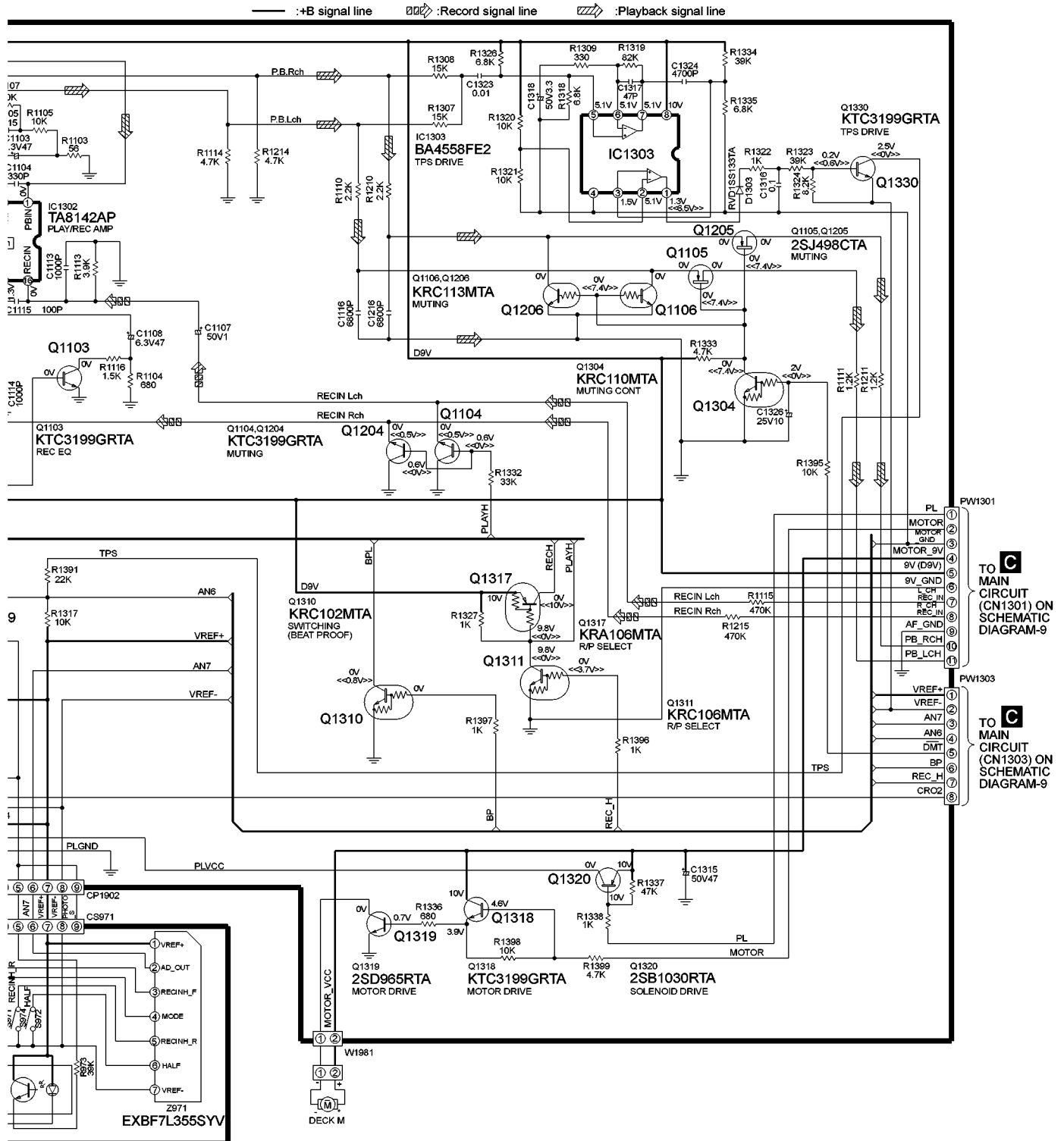
— :+B signal line



SCHEMATIC DIAGRAM-12



SCHEMATIC DIAGRAM-13



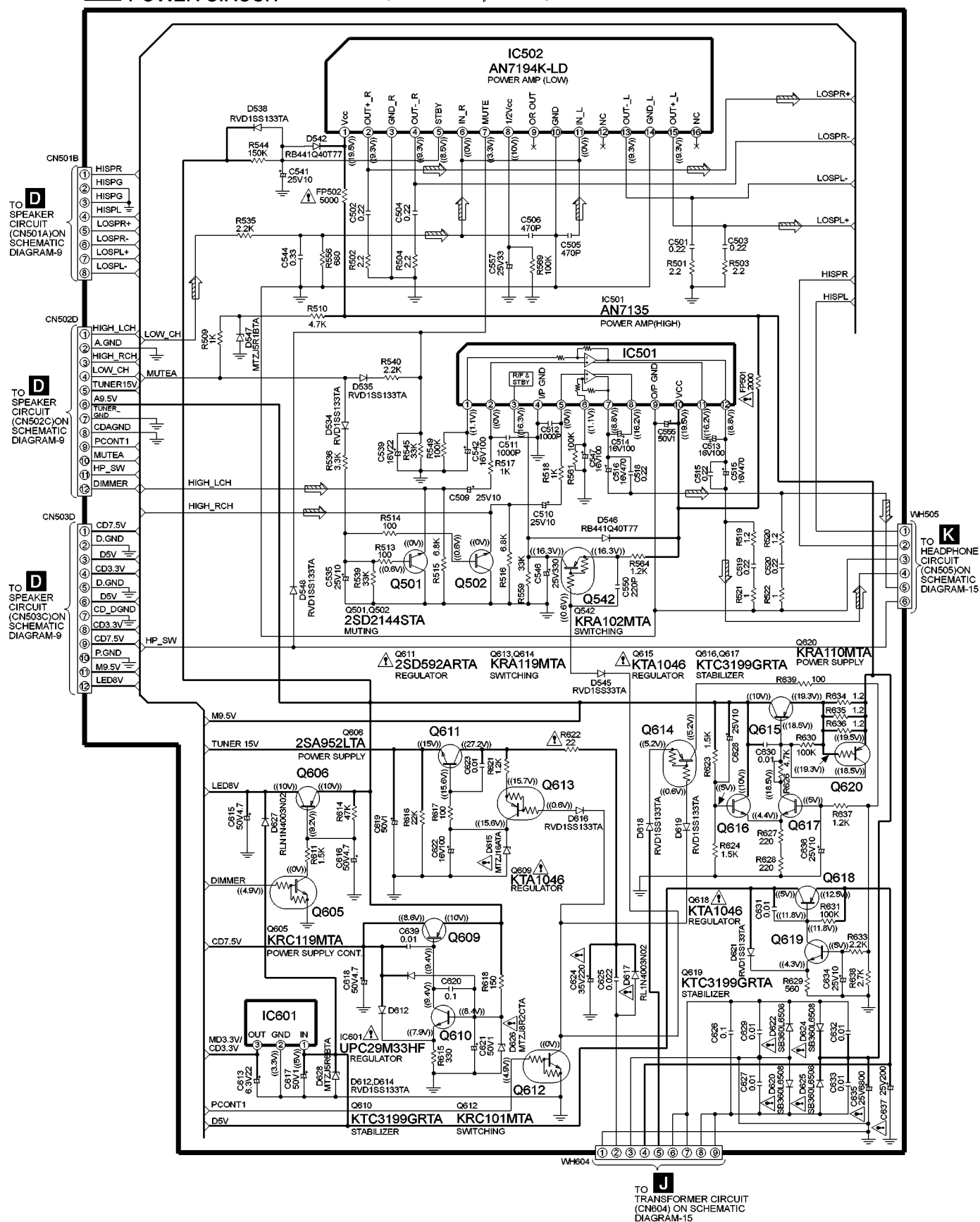
MECHANISM

SCHEMATIC DIAGRAM-14



POWER CIRCUIT

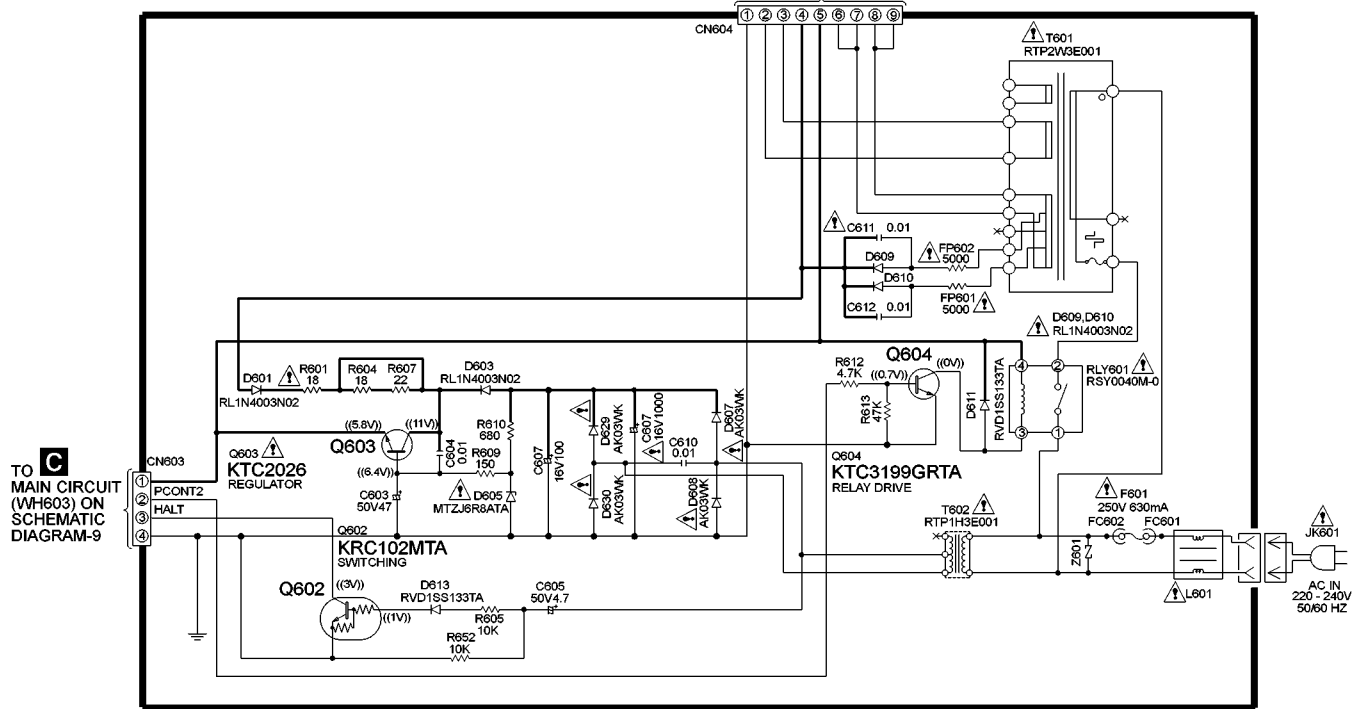
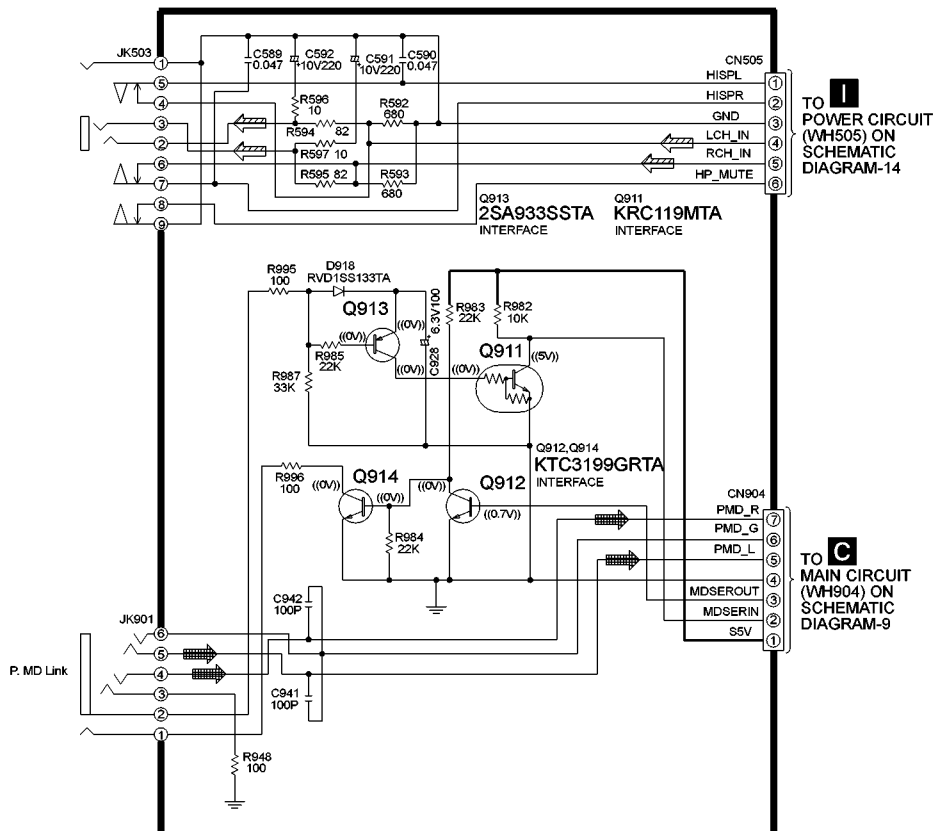
—— : +B signal line

 : MAIN signal line



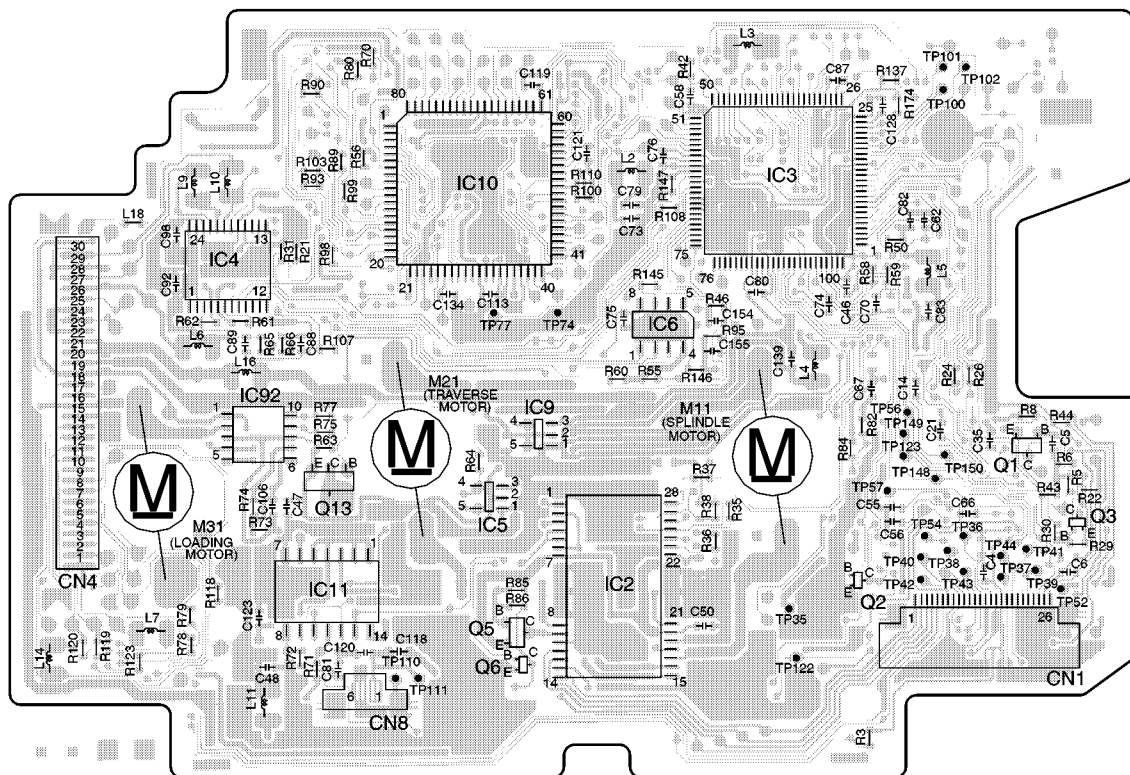
SCHEMATIC DIAGRAM-15

— : +B signal line  : MD signal line  : MAIN signal line

J TRANSFORMER CIRCUIT**K** HEADPHONE CIRCUIT

14 Printed Circuit Board

A MD SERVO P.C.B SIDE-A (REP2895A-T)



■ ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
A MD SERVO P.C.B. (SIDE-A)													
IC2	4D	L14	5A	TP74	3D	R36	4E	R75	4C	R137	2F	C75	3D
IC3	2E	L16	3B	TP77	3D	R37	4E	R77	4C	R145	3D	C76	2D
IC4	3B	L18	3B	TP100	2F	R38	4E	R78	5B	R146	3E	C79	2D
IC5	4D	CN1	5F	TP101	2F	R42	2E	R79	5B	R147	2D	C80	3E
IC6	3D	CN4	3A	TP102	2F	R43	4F	R80	2C	R174	2F	C81	5C
IC9	4D	CN8	5C	TP110	5C	R44	4G	R82	4F	C4	4G	C82	3F
IC10	2C	M11	4E	TP111	5C	R46	3E	R84	4E	C5	4F	C83	3F
IC11	4C	M21	4C	TP122	5E	R50	3F	R85	4D	C6	4G	C87	2E
IC92	4B	M31	4B	TP123	4F	R55	3D	R86	5D	C14	3F	C88	3C
Q1	4F	TP35	5E	TP148	4F	R56	2C	R89	2C	C21	4F	C89	3B
Q2	4E	TP36	4G	TP149	3E	R58	3F	R90	2C	C35	4F	C92	3B
Q3	4G	TP37	4G	TP150	4E	R59	3F	R93	2C	C46	3F	C98	3B
Q5	5D	TP38	4G	R3	5F	R60	3D	R95	3E	C47	4B	C106	4B
Q6	5D	TP39	4G	R5	4G	R61	3B	R98	3C	C48	5B	C113	3D
Q13	4C	TP40	4G	R6	4F	R62	3B	R99	2C	C50	5E	C118	5C
L2	2D	TP41	4G	R8	4F	R63	4C	R100	2D	C55	4F	C119	2D
L3	2E	TP42	4G	R21	3C	R64	4C	R103	2C	C56	4F	C120	5C
L4	3E	TP43	4G	R22	4G	R65	3B	R107	3C	C58	2E	C121	2D
L5	3F	TP44	4G	R24	3F	R66	3B	R108	2D	C62	3F	C123	5B
L6	3B	TP52	4G	R26	3F	R70	2C	R110	2D	C66	4G	C128	2F
L7	5B	TP54	4G	R29	4G	R71	5C	R118	4B	C67	3F	C134	3C
L9	2B	TP56	4F	R30	4G	R72	4B	R119	5A	C70	3F	C139	3E
L10	2B	TP57	4F	R31	3B	R73	4B	R120	5A	C73	3D	C154	3E
L11	5B			R35	4E	R74	4B	R123	5B	C74	3E	C155	3E

A B C D E F G

1

B CD SERVO P.C.B (REP2807C)

2

3

4

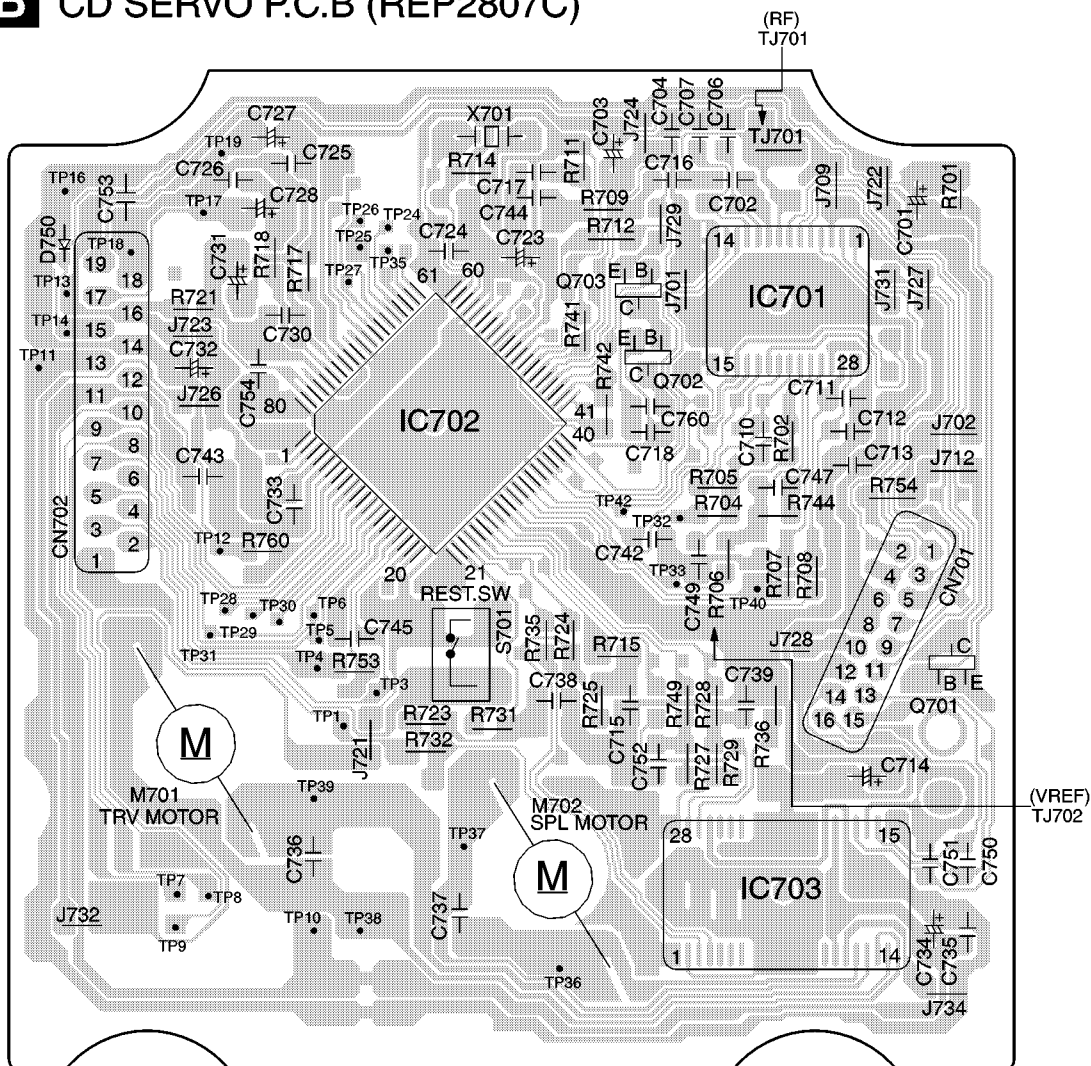
5

6

7

8

9



A

B

C

D

E

F

G

1

C MAIN P.C.B. (REPX0227C)

2

3

4

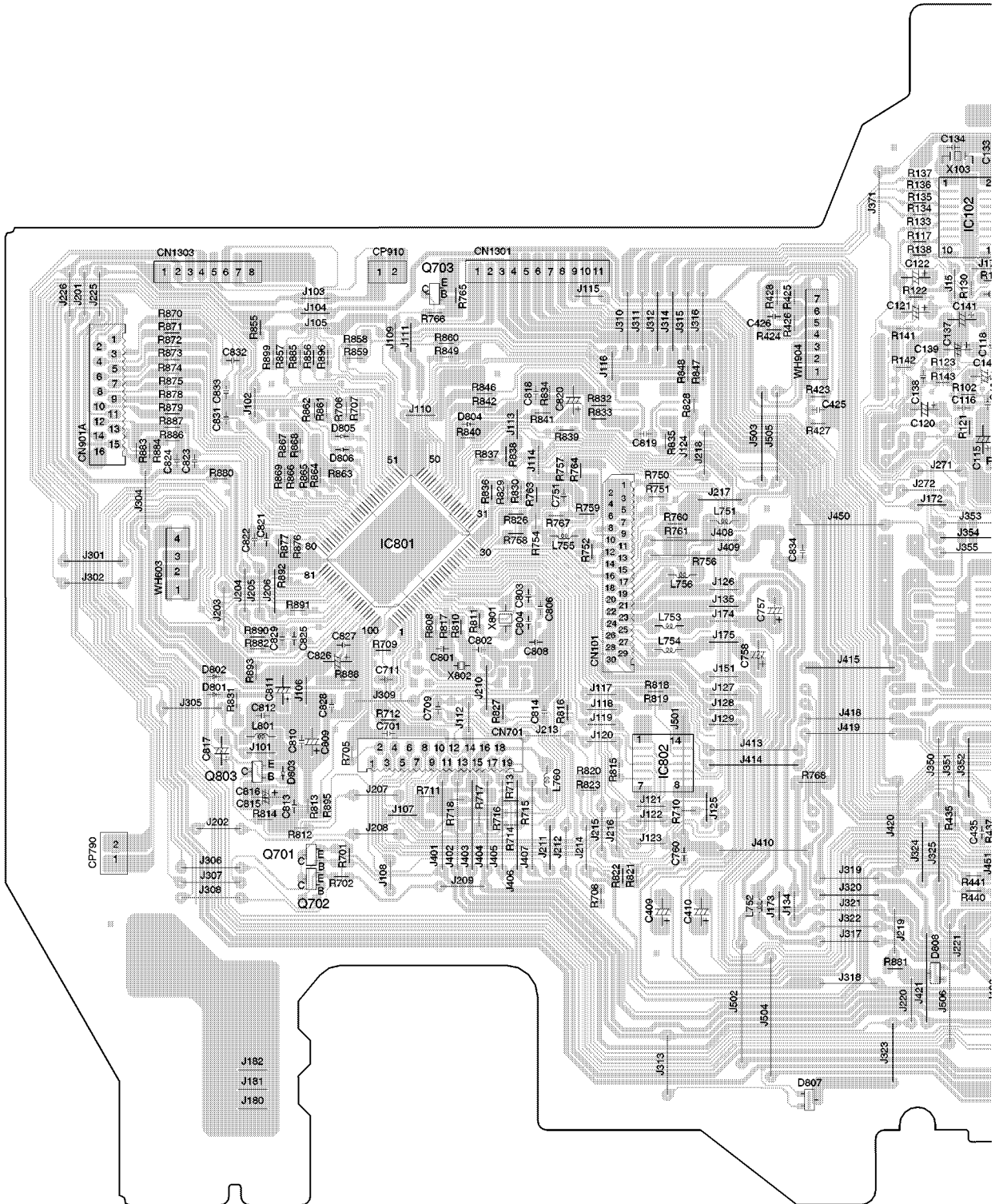
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6

7

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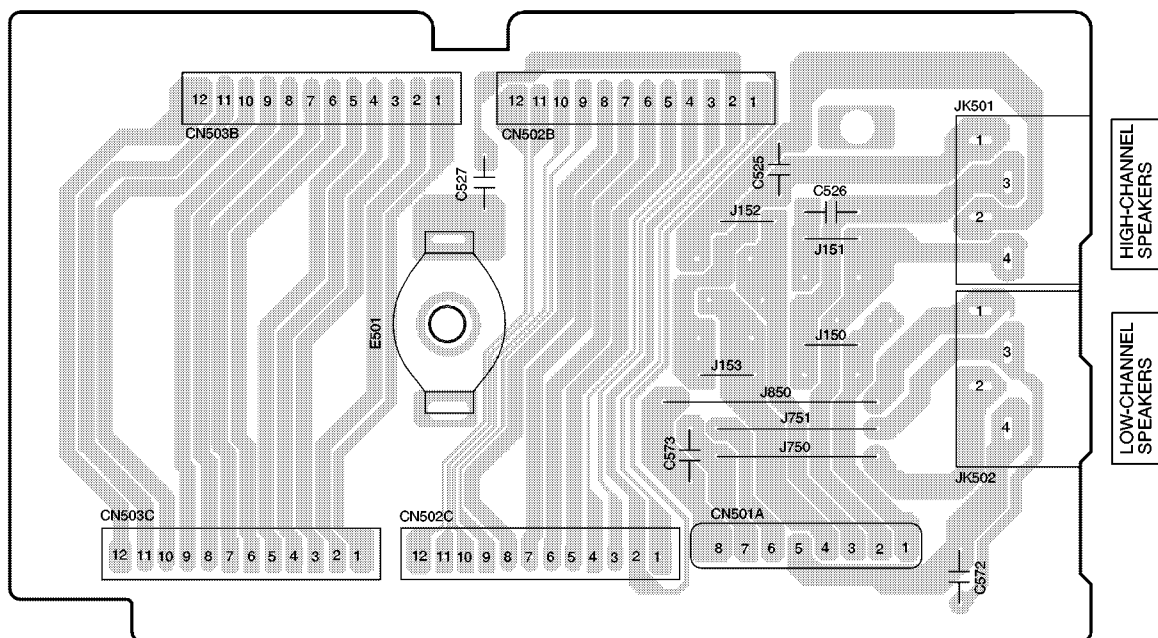
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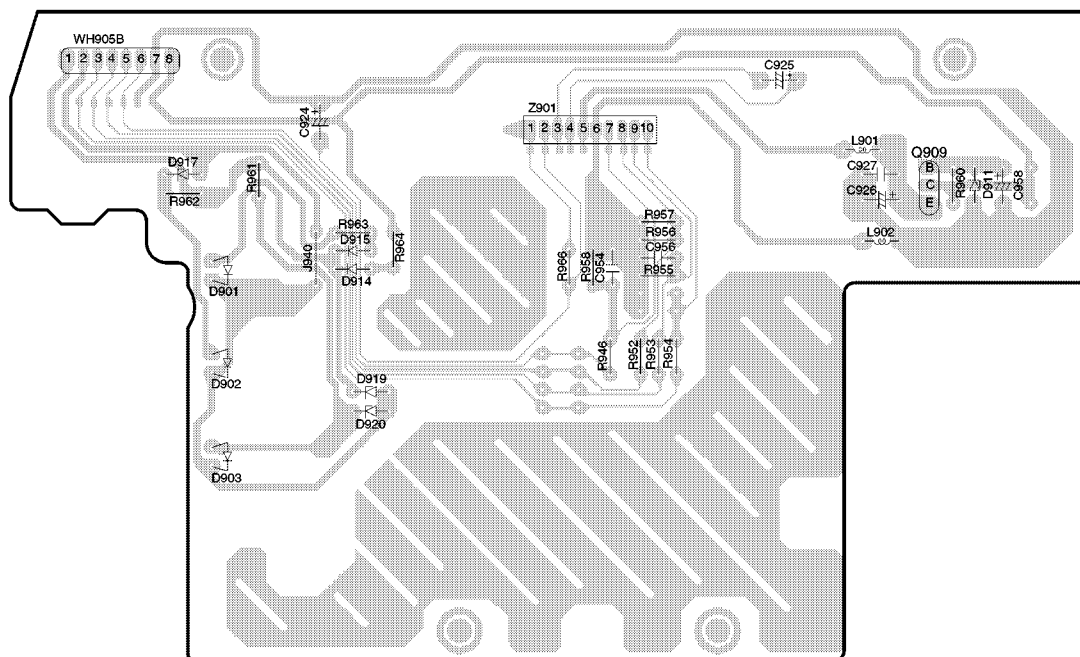


A B C D E F G

D SPEAKER P.C.B. (REPX0228C)



F FL P.C.B. (REPX0226A)



A B C D E F G

1

G PANEL P.C.B. (REPX0226A)

2

3

4

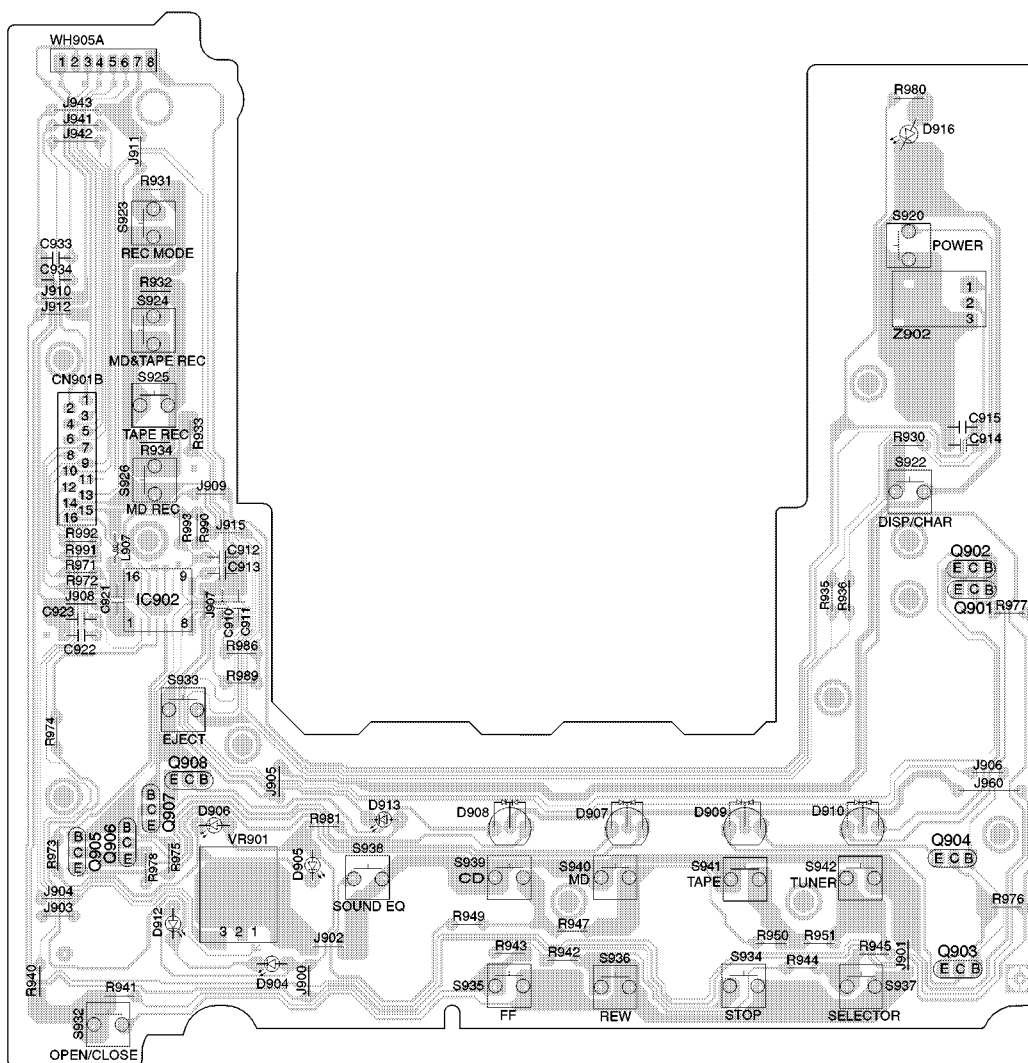
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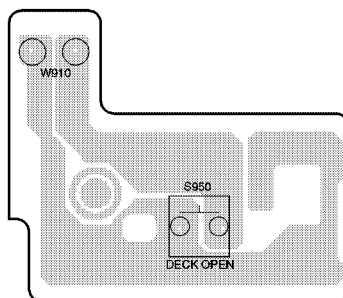
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8

9



E DECK SWITCH P.C.B. (REPX0228C)



1

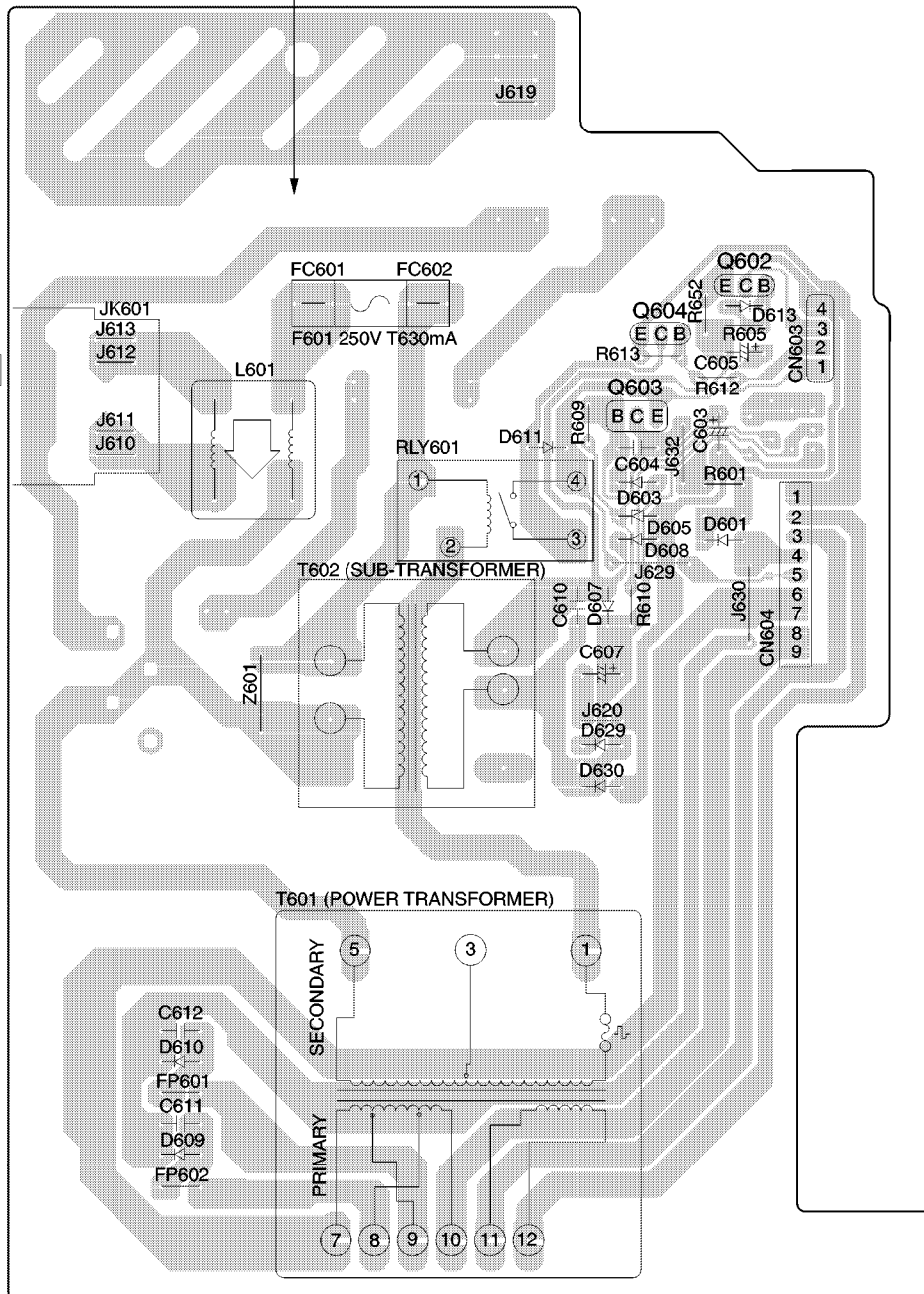


A B C D E F G

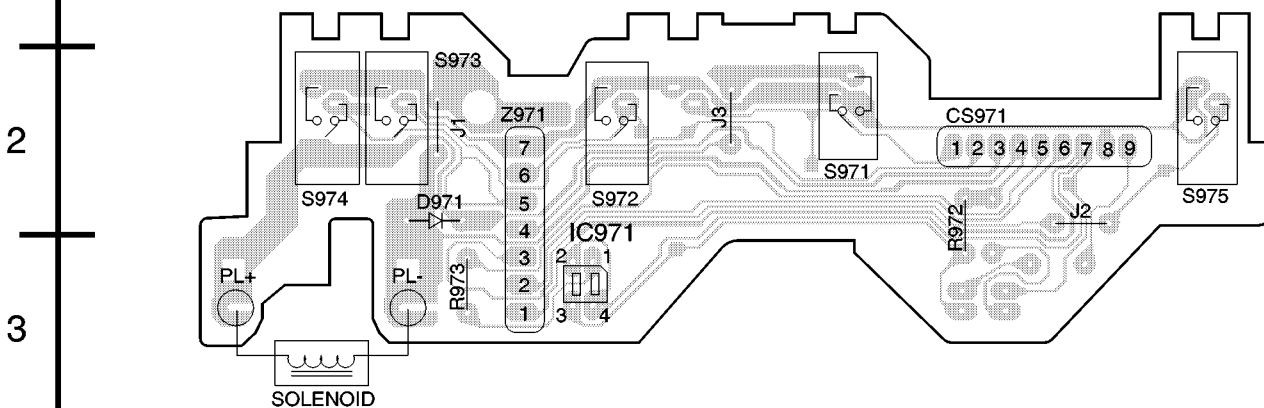
J TRANSFORMER P.C.B. (REPX0228C)

CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE. PLEASE DO NOT
TOUCH THIS P.C.B

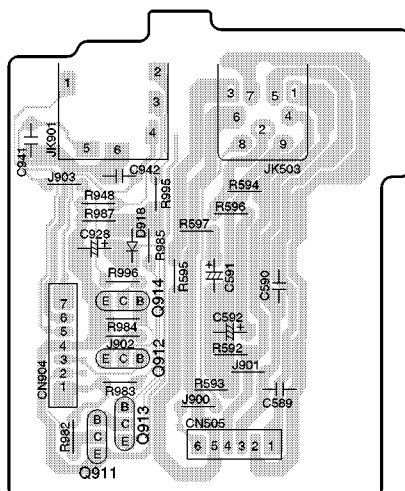
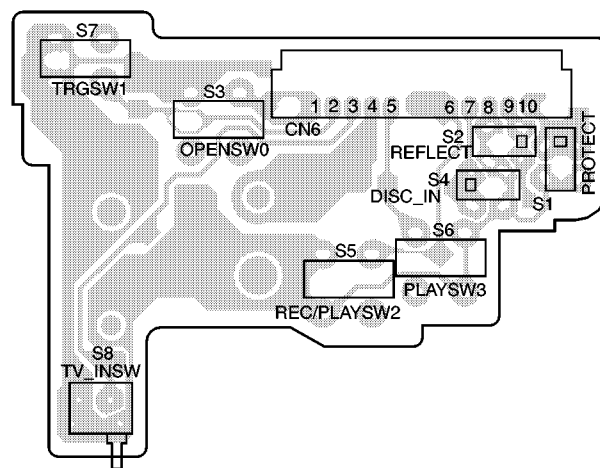
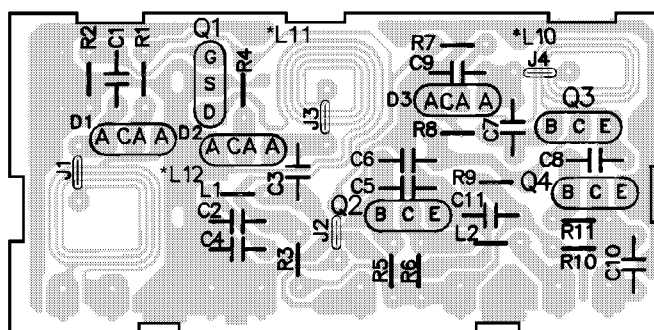
AC IN ~
230V-240V
50HZ



A B C D E F G

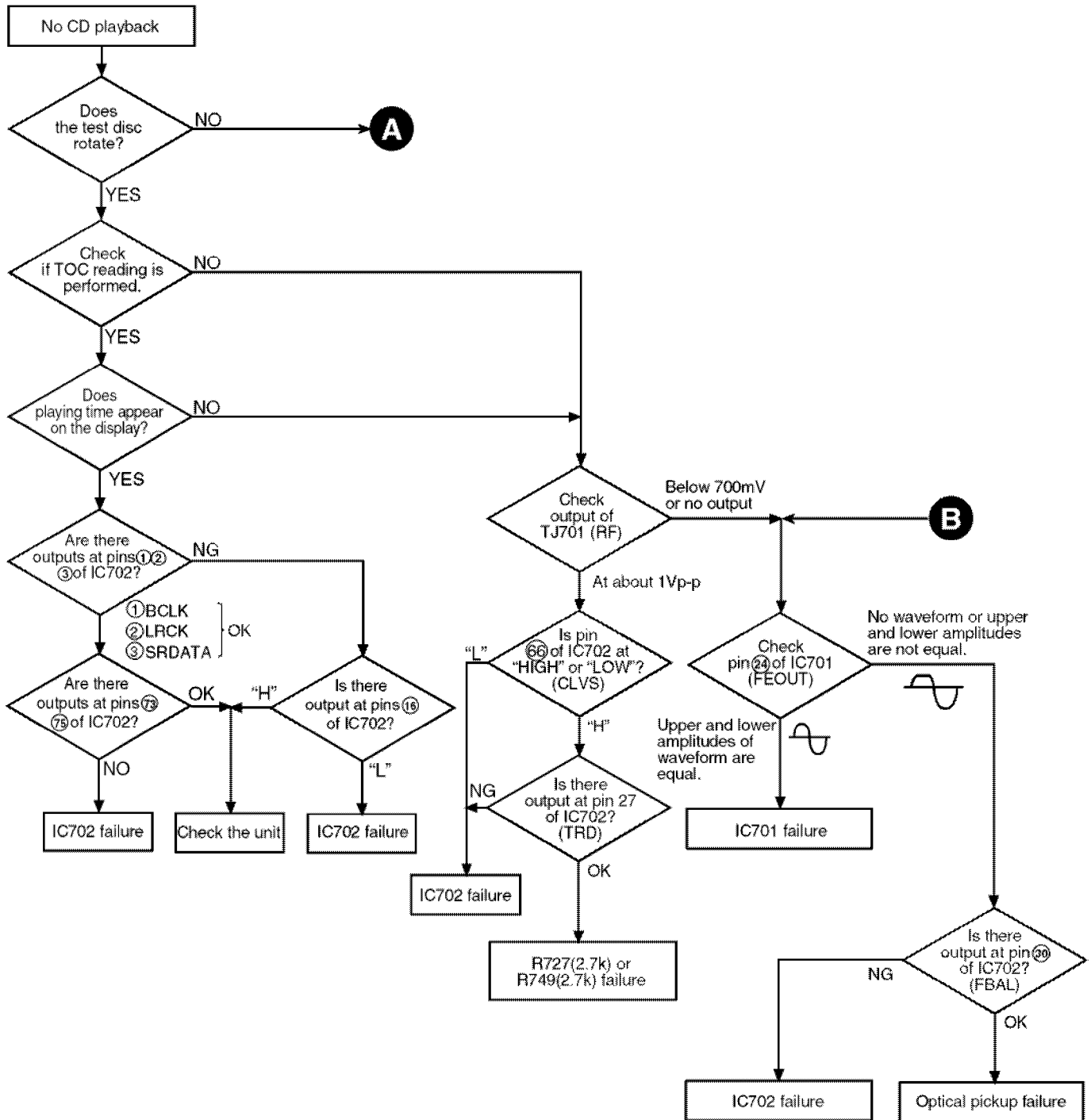
1 **M** DECK MECHANISM P.C.B (REPX0108)4 **K** HEADPHONE P.C.B (REPX0228C)

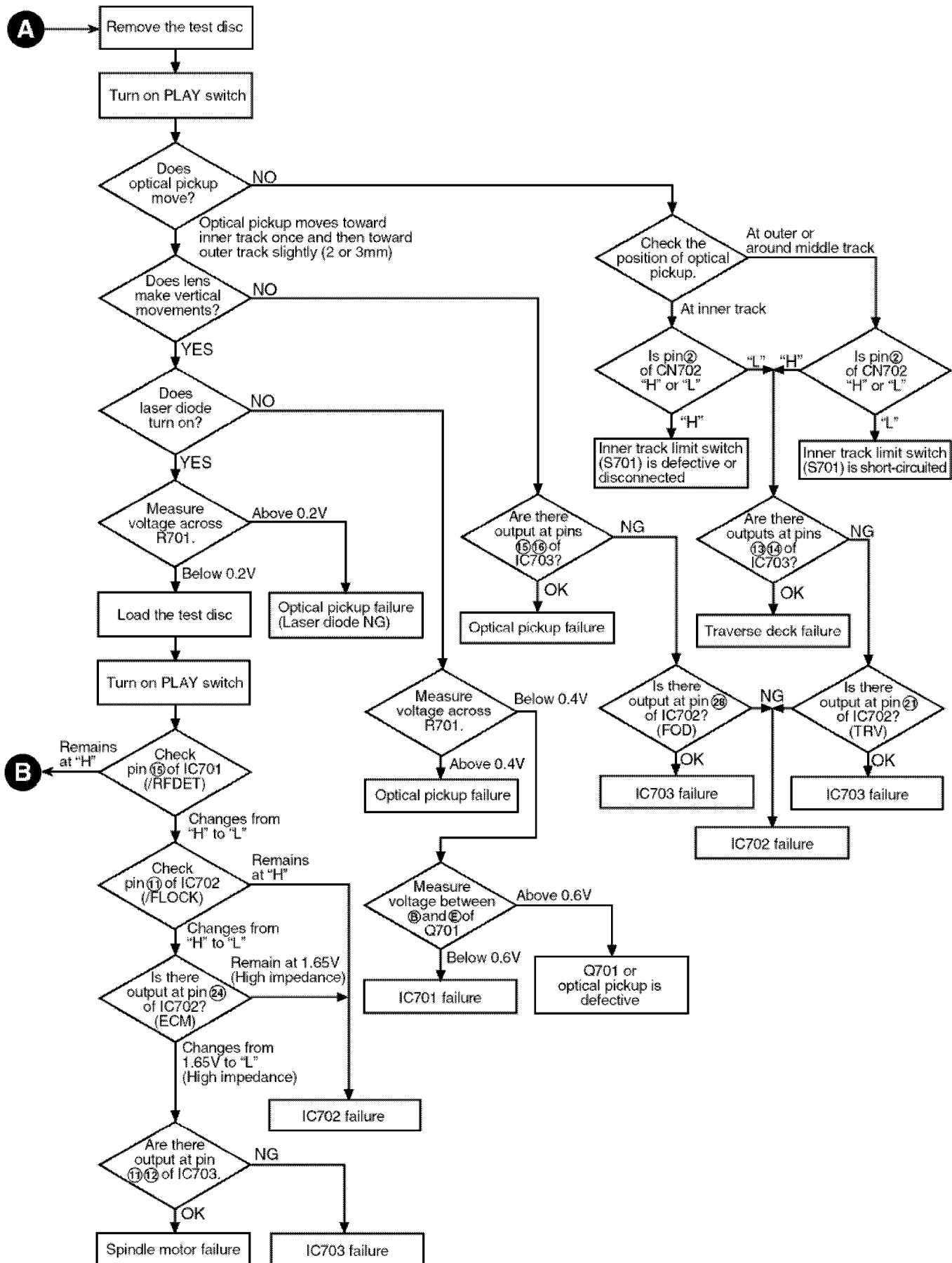
P-MD PHONES

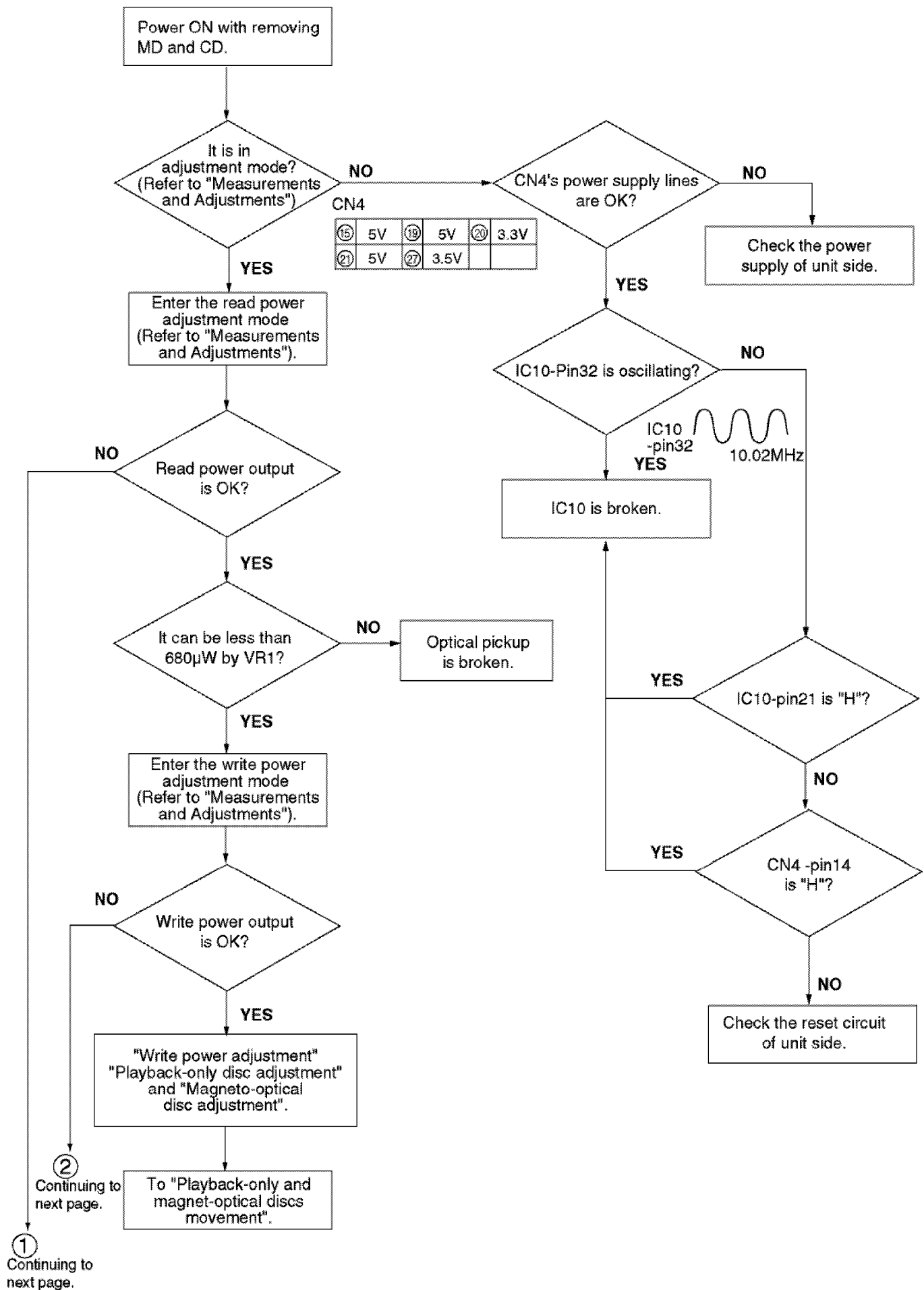
4 **L** MD SWITCH P.C.B (REP2575A)8 **N** TUNER PACK P.C.B (REP1999B)

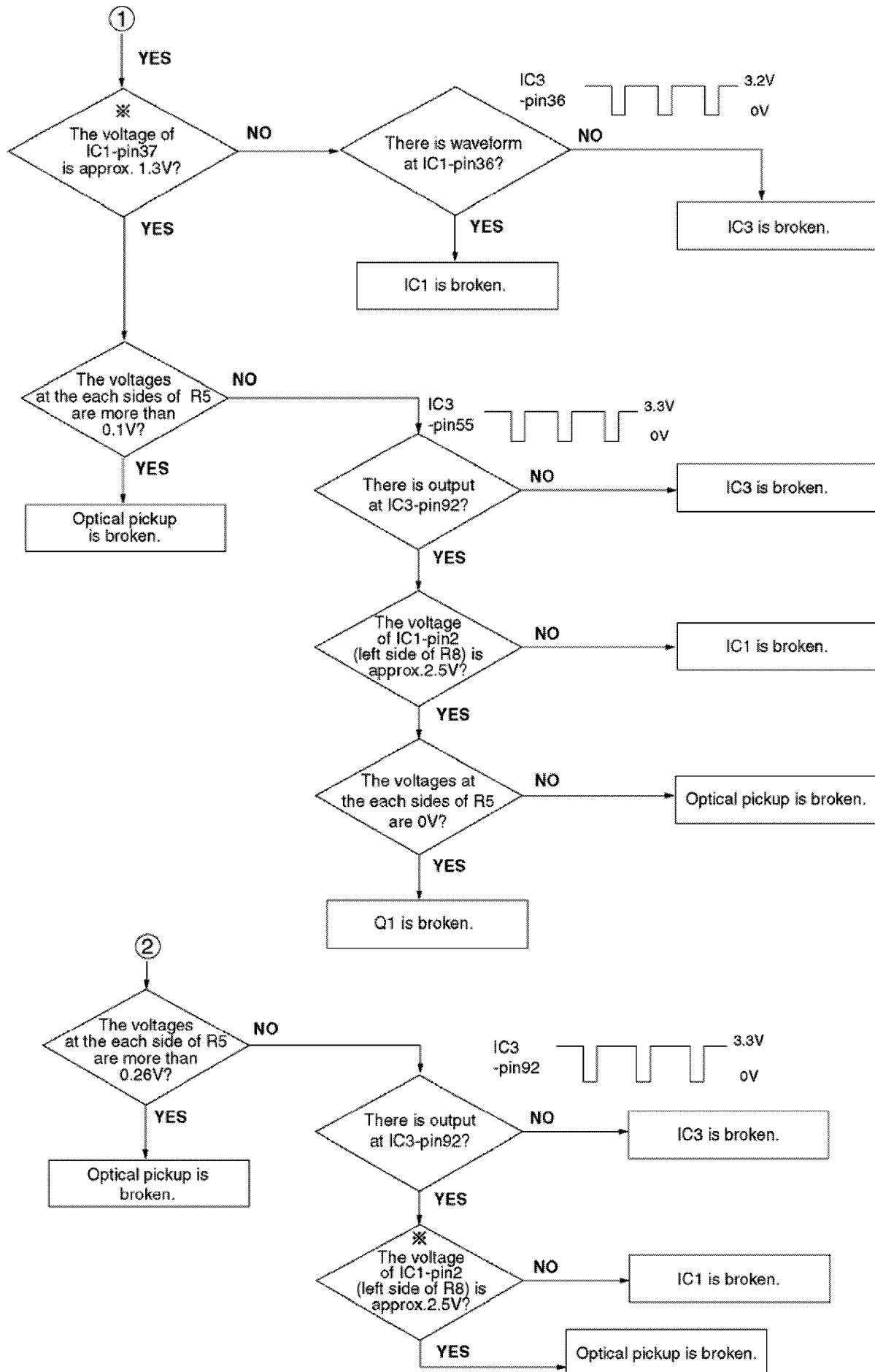


16 Troubleshooting Guide

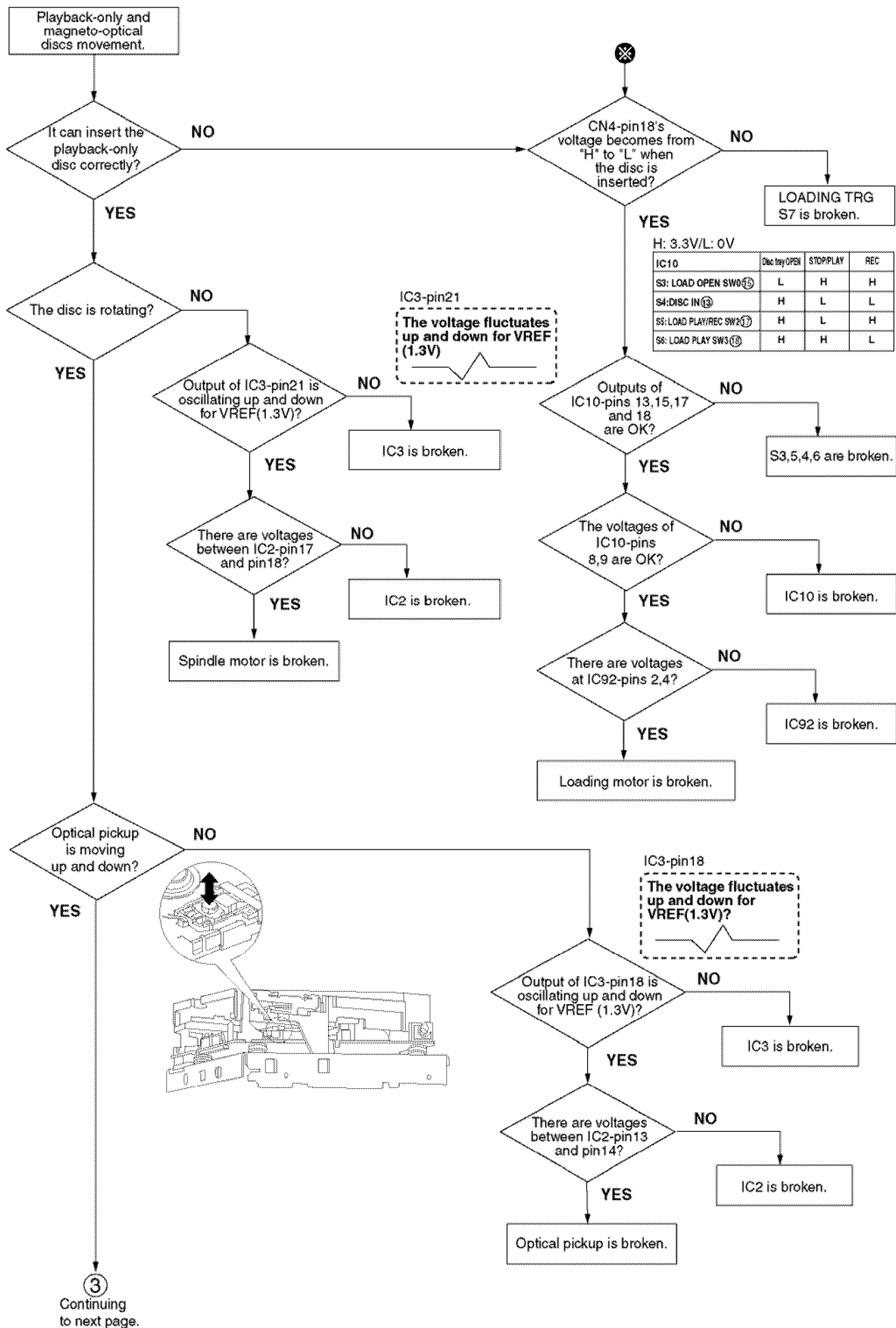


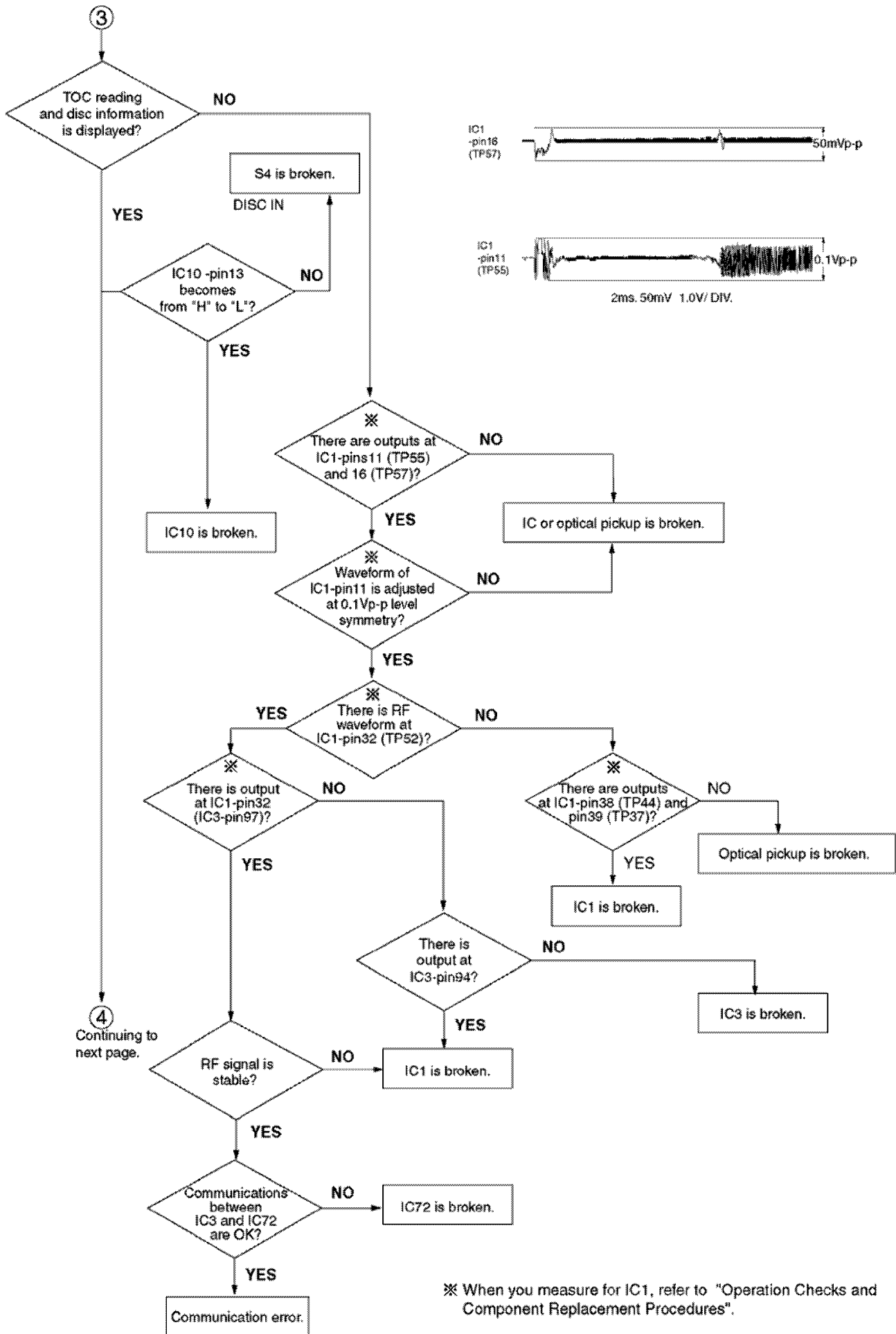


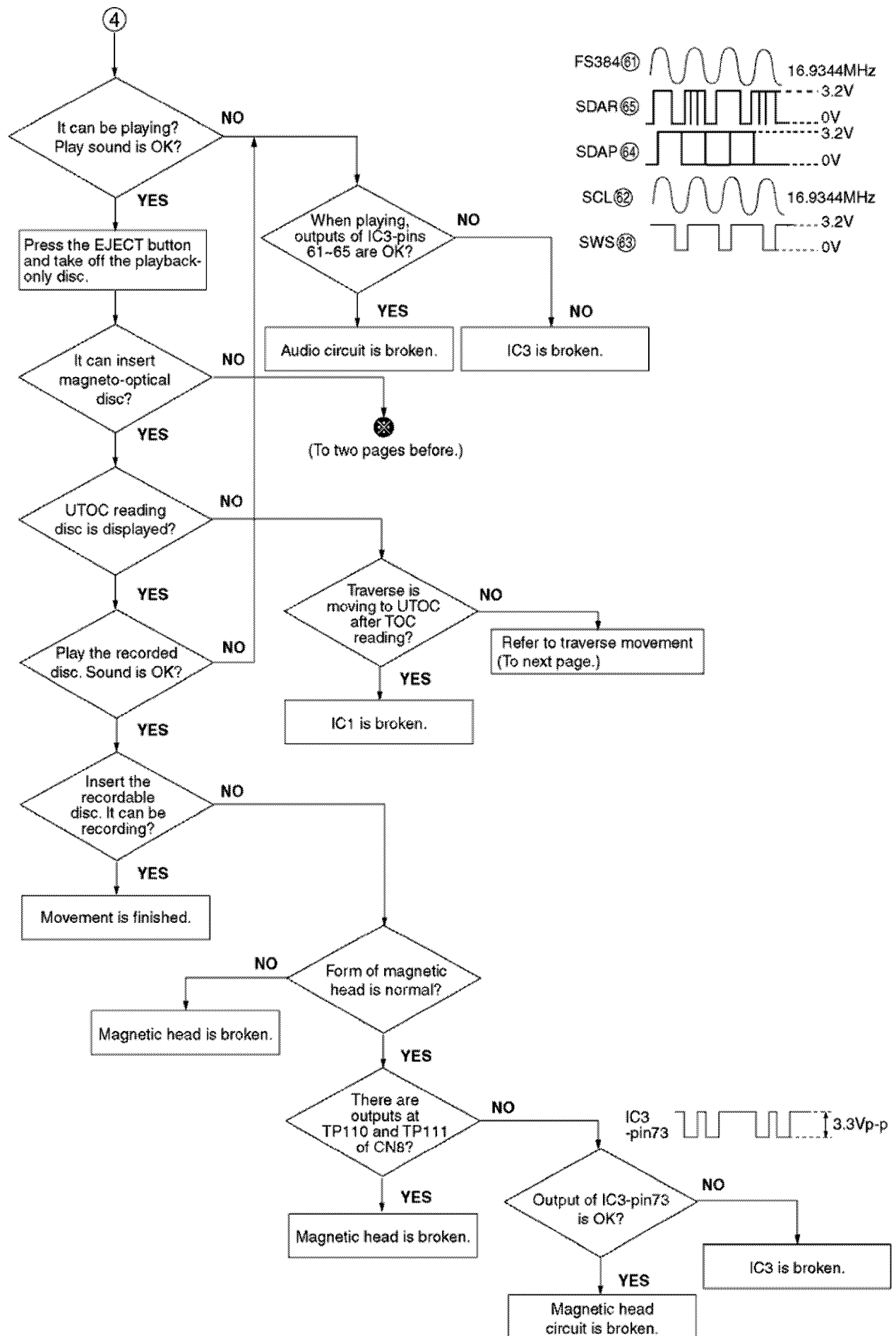


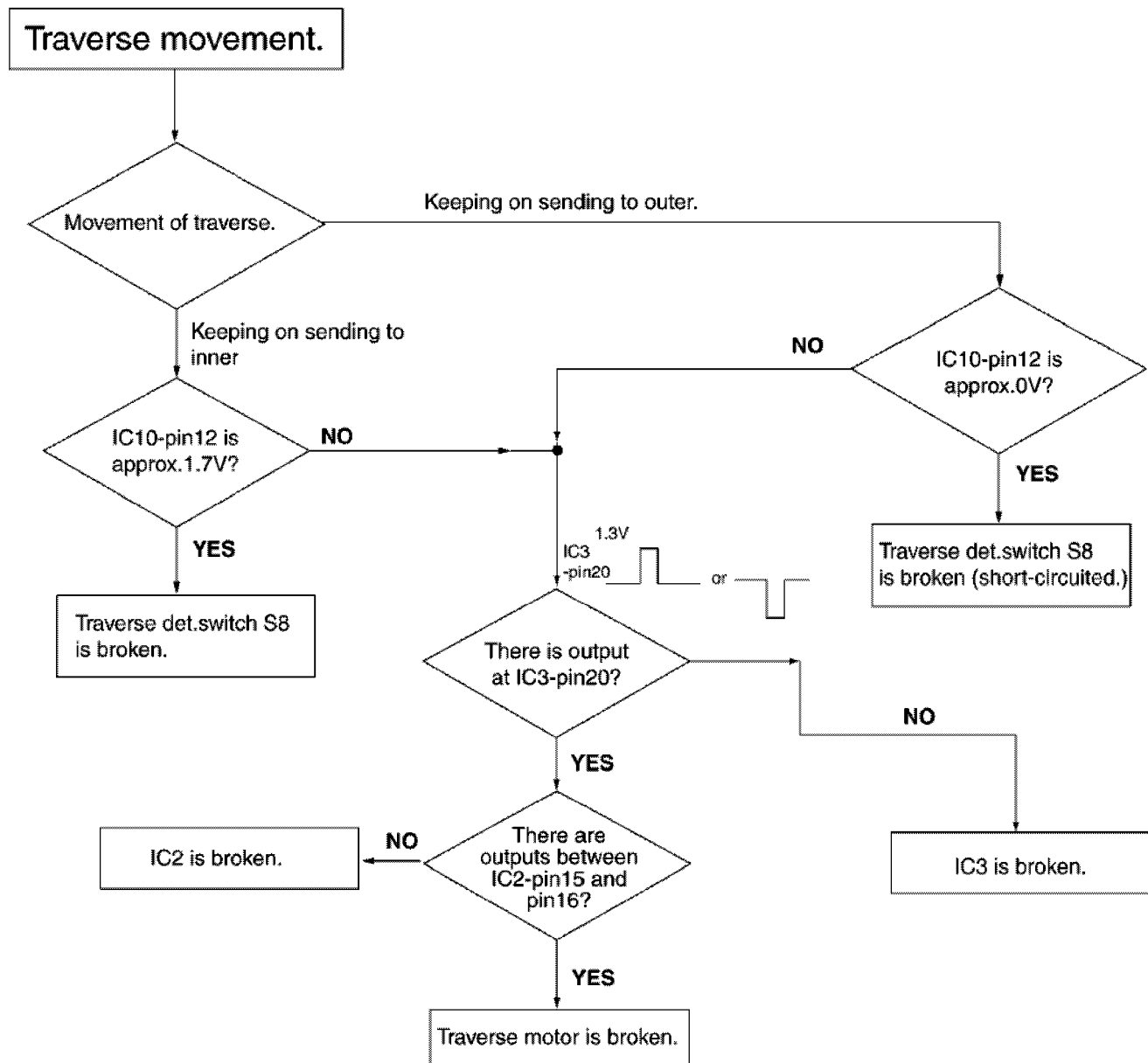


※ When you measure for IC1, refer to "Operation Checks and Component Replacement Procedures".









17 Parts Location and Replacement Parts List

Notes:

- Important safety notice:

Components identified by \triangle mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardent (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.

When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.

- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)
Parts without these indications can be used for all areas.
- Warning: This product uses a laser diode. Refer to caution statements "Precaution of Laser Diode".

ACTUNG:

– Die Lasereinheit nicht zerlegen.

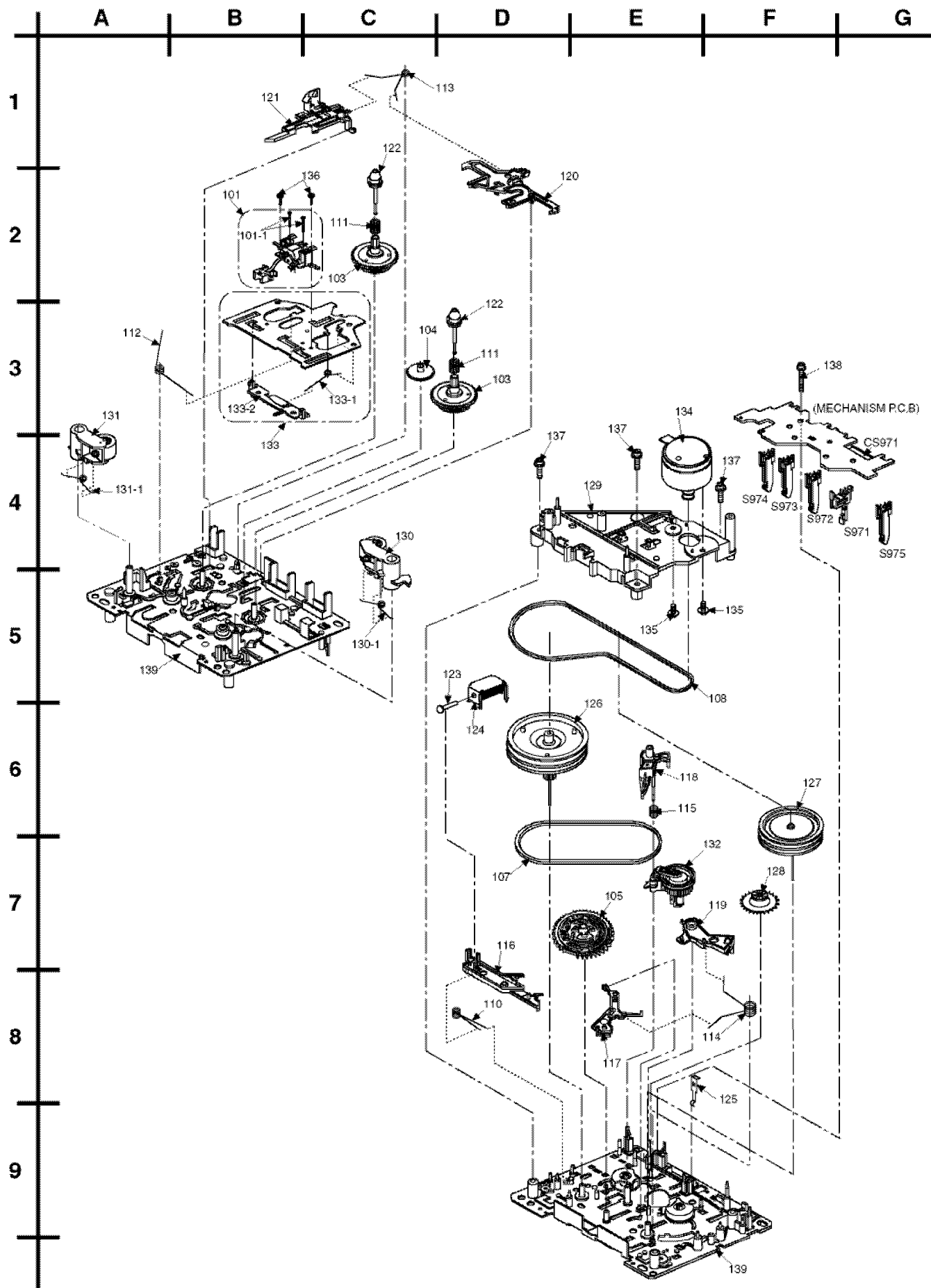
– Die Lasereinheit darf nur gegen eine vom Hersteller spezifizierte Einheit ausgetauscht werden.

- Capacitor values are in microfarads (μ F) unless specified otherwise, P= Pico-farads (pF), F= Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
- The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
- [M] Indicates in the Remarks columns indicates parts supplied by **MESA**.
- The "(SF)" mark denotes the standard part.
- Remote Control Unit: Supply period for three years from terminal of production.
- Reference for O/I book languages are as follows:

Ar :	Arabic	Du :	Dutch	It :	Italian	Sp :	Spanish
Cf :	Canadian French	En :	English	Ko :	Korean	Sw :	Swedish
Cz :	Czech	Fr :	French	Po :	Polish	Co :	Traditional Chinese
Da :	Danish	Ge :	German	Ru :	Russian	Cn :	Simplified Chinese

17.1. Deck Mechanism (RAA4106)

17.1.1. Deck Mechanism Parts Location

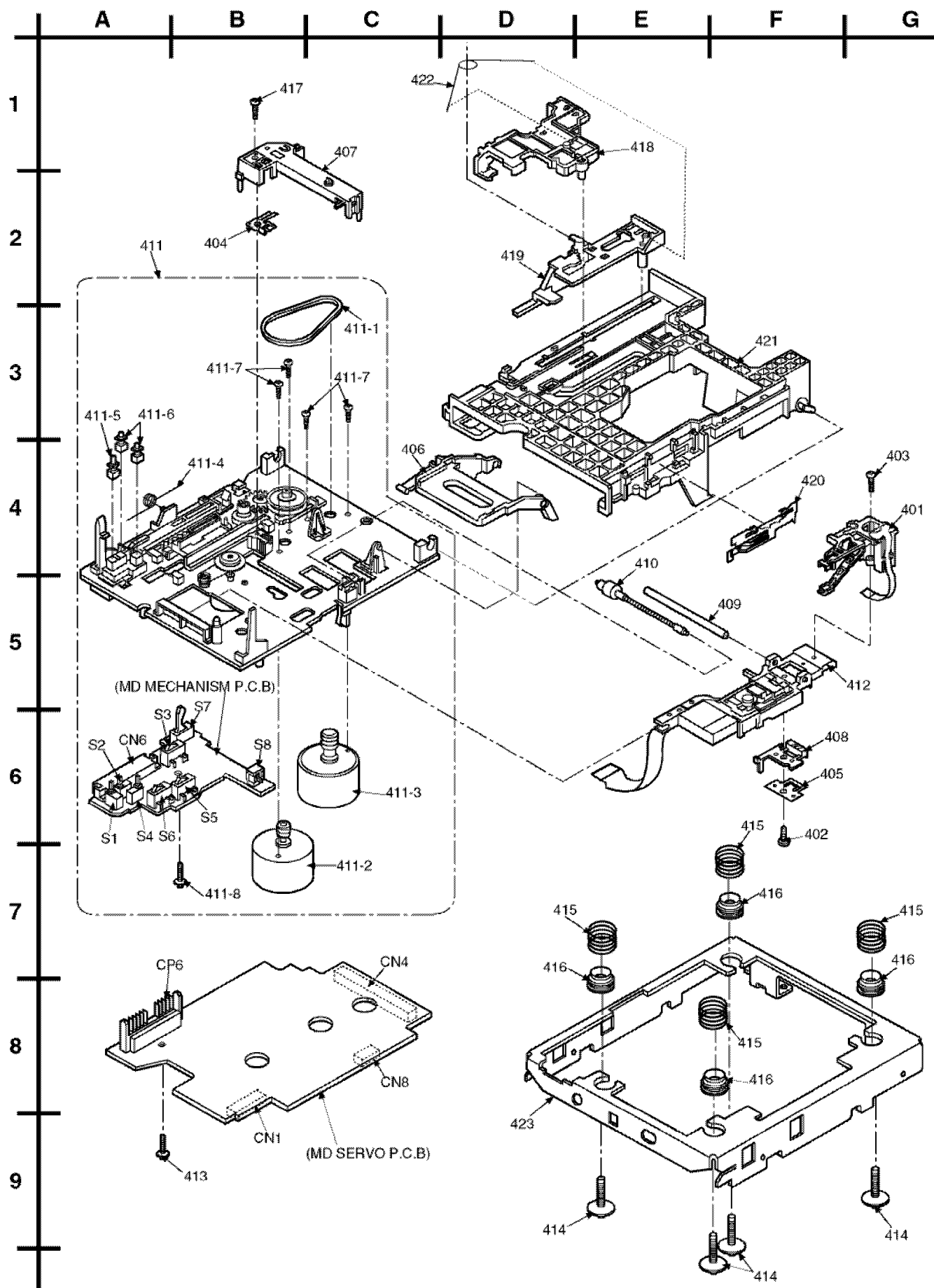


17.1.2. Deck Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	RED0043	R/P HEAD BLOCK UNIT	[M]
101-1	RHD17015	SCREW	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026	MAIN GEAR	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0034-1	CAPSTAN BELT 'A'	[M]
110	RMB0312	TRIGGER LEVEL SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAD PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406	FR LEVER SP	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372	WINDING LEVER	[M]
119	RML0374	EJECT LEVER	[M]
120	RMM0131	BRAKE ROD	[M]
121	RMM0133-1	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RSJ0003	PLUNGER	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0049	FLYWHEEL 'F' ASS'Y	[M]
127	RXF0050	FLYWHEEL 'R' ASS'Y	[M]
128	RXG0040	FF RELAY GEAR ASS'Y	[M]
129	RMK0283A-J	SUB CHASSIS	[M]
130	RXL0124	PINCH ARM 'F' ASS'Y	[M]
130-1	RMB0401	PINCH ARM SPRING 'F'	[M]
131	RXL0125	PINCH ARM 'R' ASS'Y	[M]
131-1	RMB0402	PINCH ARM SPRING 'R'	[M]
132	RXL0126	WINDING ARM ASS'Y	[M]
133	RXQ0412	HEAD PANEL ASS'Y	[M]
133-1	RMB0405	FR ROD SPRING	[M]
133-2	RMM0132	FR ROD	[M]
134	REM0064-2	CAP MOTOR ASS'Y	[M]
135	RHD26022	MOTOR SCREW	[M]
136	XTW2+5L	HEAD BLOCK UNIT SCRE	[M]
137	XTW26+10S	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17	PCB EARTH SCREW	[M]
139	RFKJSTR280PP	CHASSIS ASS'Y	[M]

17.2. MD Mechanism

17.2.1. MD Mechanism Parts Location

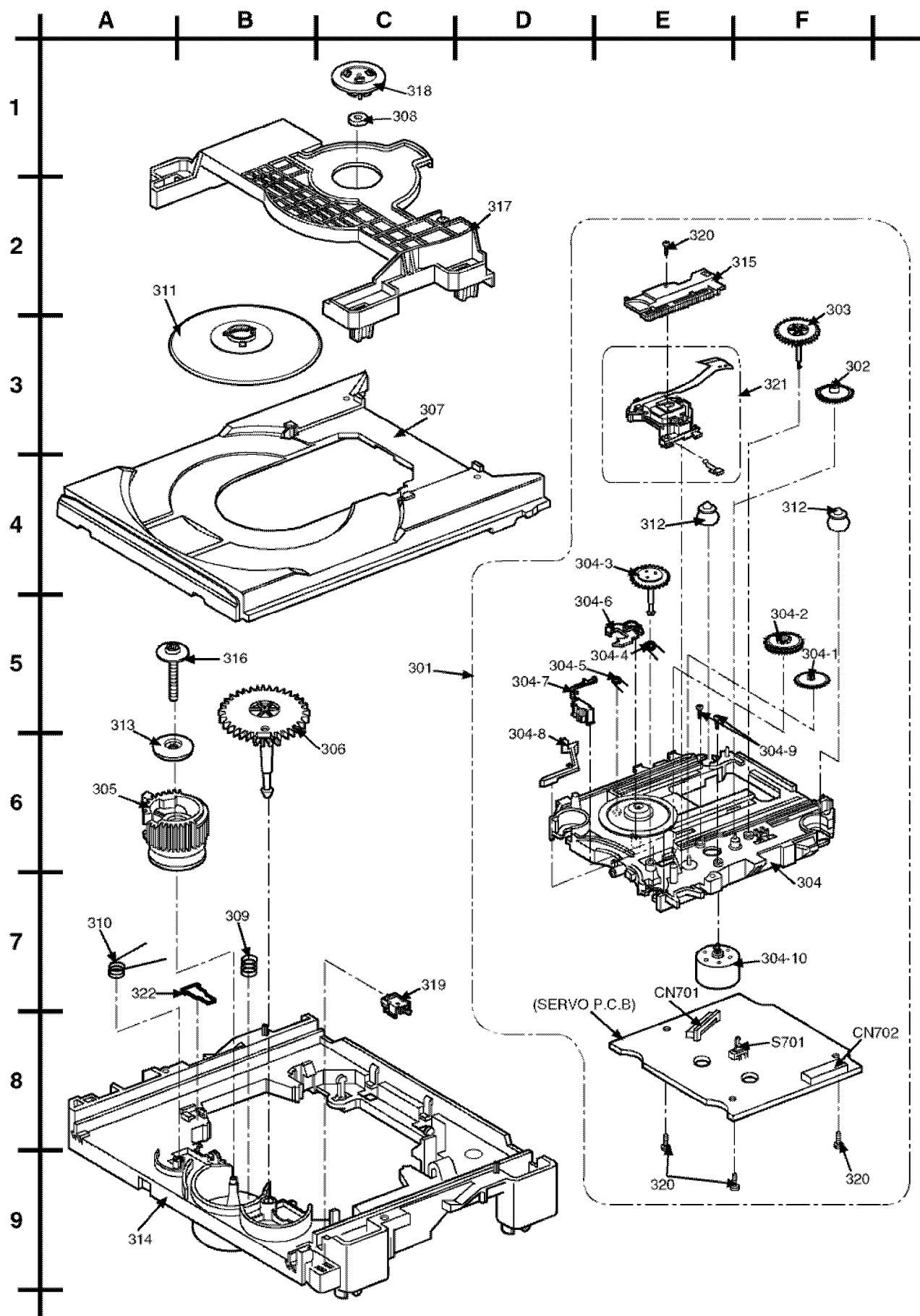


17.2.2. MD Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
401	RED0047-2	RECORDING HEAD	[M]
402	RHD17021	NUT PLATE SCREW	[M]
403	RHD17022	RECORDING HEAD SCREW	[M]
404	RMC0348	THRUST SPRING	[M]
405	RMC0349	NUT PLATE SPRING	[M]
406	RML0515	HEAD SHIFTER	[M]
407	RMQ0750	REF BASE	[M]
408	RMQ0751	NUT PLATE	[M]
409	RMS0611	MAIN SHAFT	[M]
410	RXJ0021	DRIVE SHAFT ASS'Y	[M]
411	RXK0249	MECHA CHASSIS UNIT	[M]
411-1	RDV0055-J	BELT	[M]
411-2	REM0077	TRAVERSE MOTOR ASS'Y	[M]
411-3	REM0078	LOADING MOTOR ASS'Y	[M]
411-4	RMB0548	HOLDER SPRING	[M]
411-5	RMQ0752	PIN A (BLACK)	[M]
411-6	RMQ0753	PIN B (NATURAL)	[M]
411-7	XQN17+C25FZ	MOTOR SCREW	[M]
411-8	XYC2+FF105	PCB SCREW	[M]
412	RAF1701A-S	MD OPU	[M]
413	XTW2+6S	SCREW	[M]
414	RHD20053	SCREW	[M]
415	RMB0504	DAMPER SPRING	[M]
416	RMG0447-K2	DAMPER	[M]
417	XTN17+6GFZ	REF. BASE SCREW	[M]
418	RML0514	LOCK LEVER	[M]
419	RMM0199	SLIDER	[M]
420	RMM0200	SHUTTER OPENER	[M]
421	RMR1118-K2	HOLDER	[M]
422	RMB0547-1	LOCK LEVER SPRING	[M]
423	RMA1117-1J	MECAH BASE FRAME	[M]

17.3. CD Loading Mechanism

17.3.1. CD Loading Mechanism Parts Location

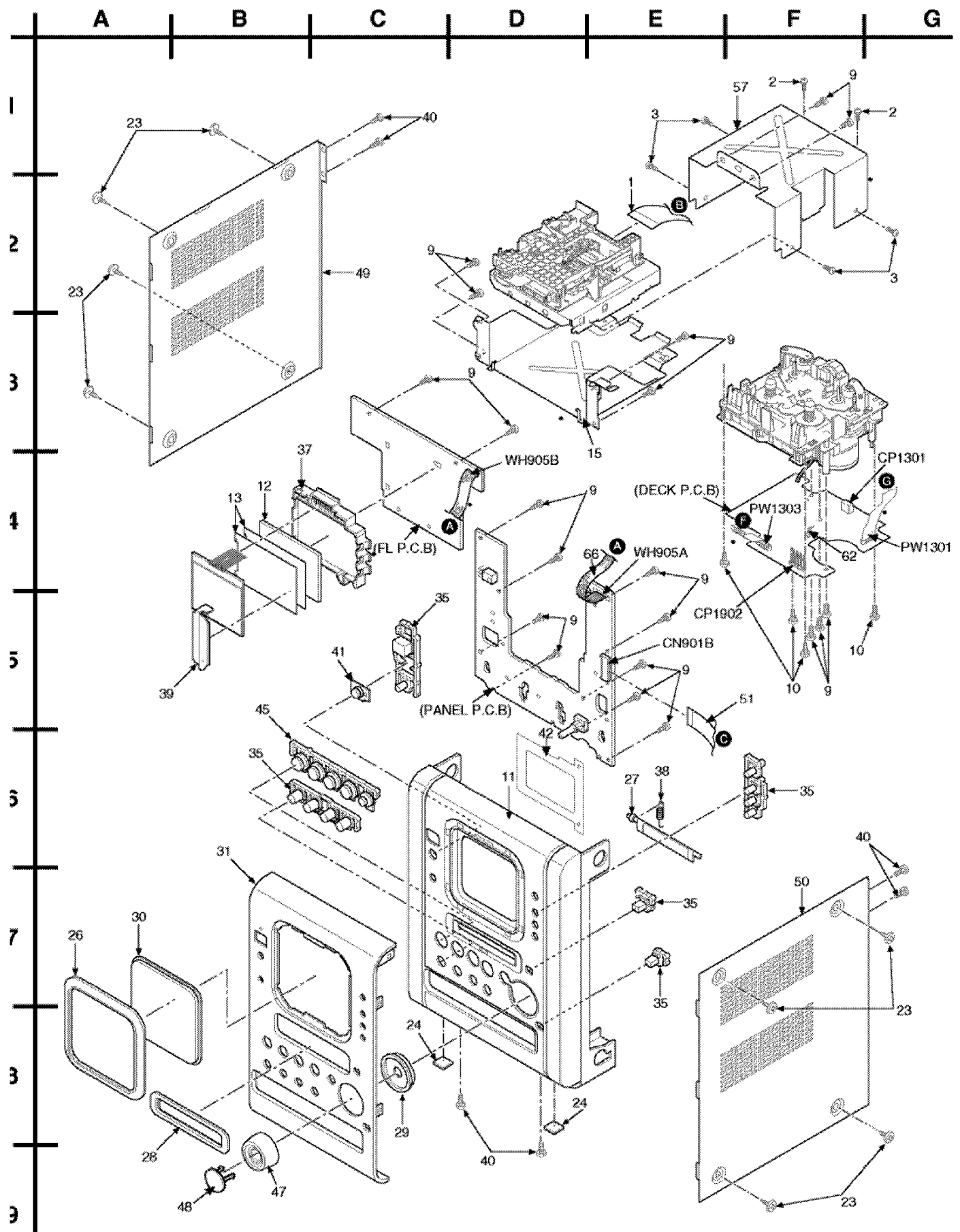


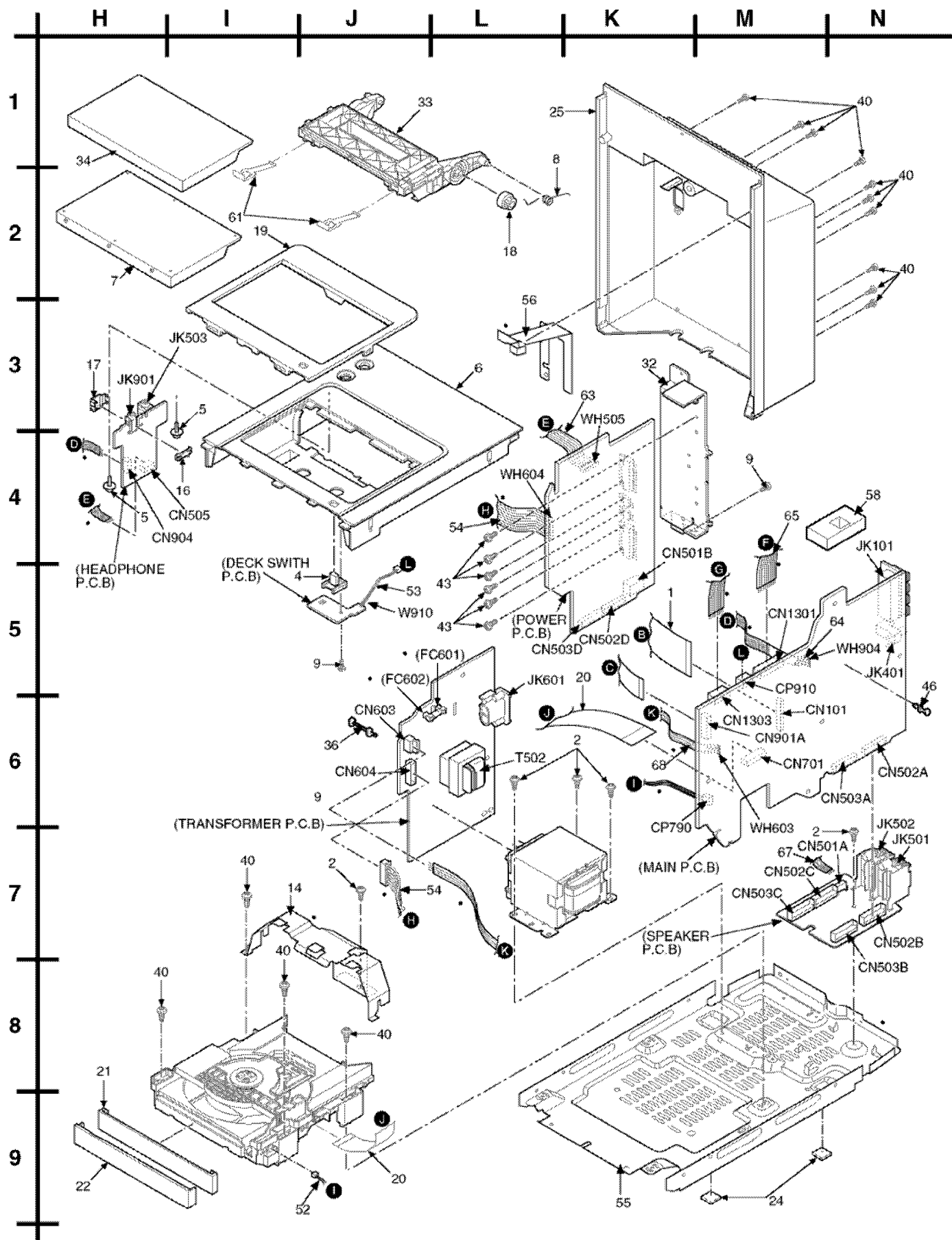
17.3.2. CD Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RAE0155Z-1V	CT100W TRAVERSE	[M]
302	RDG0455	TRAVERSE GEAR (A)	[M]
303	RDG0456	TRAVERSE GEAR (B)	[M]
304	RFKNCT100	TRAVERSE BASE ASS'Y	[M]
304-1	RDG0457	LOAD GEAR (A)	[M]
304-2	RDG0458	LOAD GEAR (B)	[M]
304-3	RDG0459	LOAD GEAR (C)	[M]
304-4	RME0290	PRESS SPRING	[M]
304-5	RME0291	LOCK SPRING	[M]
304-6	RML0551	TRG LEVER	[M]
304-7	RML0552	LOCK LEVER	[M]
304-8	RMM0219	STOPPER	[M]
304-9	XQN17+C28F	SCREW	[M]
304-10	RXQ0632	TRV MOTOR UNIT	[M]
305	RDG0460	CAM GEAR	[M]
306	RDG0461	DRIVE GEAR	[M]
307	RGQ0292-H	TRAY	[M]
308	RHM0001	MAGNET	[M]
309	RMB0603	FLOATING SPRING	[M]
310	RME0288	CENTERING SPRING	[M]
311	RFKNXED50-S	CLAMPER HOLDER ASS'Y	[M]
312	RMG0510-K	FLOATING RUBBER (A)	[M]
313	RMG0511-K	FLOATING RUBBER (B)	[M]
314	RMK0422	MECHA CHASSIS	[M]
315	RMM0218	TRAVERSE DRIVE RACK	[M]
316	RHD30083	CAM. GEAR SCREW	[M]
317	RMRL223-K	CLAMP PLATE	[M]
318	RMRL242-X1	FIXTURE	[M]
320	XTN2+6G	SCREW	[M]
321	RXQ0704	OPU UNIT	[M]
322	RMG0544-H	BRAKE SHOE	[M]

17.4. Cabinet

17.4.1. Cabinet Parts Location





17.4.2. Cabinet Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	REEX0098	30P FFC	[M]
2	XTB3+8JFZ	SCREW	[M]
3	XTV26+5F	TAPPING SCREW M26X6	[M]
4	RGUX0359-W	CASS EJECT BUTTON	[M]
5	RHD26016	SCREW (PHONE JACK)	[M]
6	RKMX0055-S	TOP CABINET	[M]
7	RGFX0035-S	CASS LID	[M]
8	RMBX0014	CASS OPEN SPRING	[M]
9	XTBS26+10J	SCREW	[M]
10	XTV3+10G	SCREW	[M]
11	RKMX0056-S	FRONT CABINET	[M]
12	RGLX0027	LCD LIGHTING PANEL	[M]
13	RGFX0037	LCD DIFFUSER SHEET	[M]
14	RMNX0035	MD MECHA SUPPORTER	[M]
15	RMNX0034	MD ANGLE	[M]
16	RMN0567	JACK HOLDER (B)	[M]
17	RMN0566	JACK HOLDER (A)	[M]
18	RDG0357	DUMPER GEAR	[M]
19	RKQX0011-W	TOP CAB ORNAMENT	[M]
20	REEX0097	19P FFC	[M]
21	RGKX0060-S	CD LID	[M]
22	RGKX0061-W	CD LID ORNAMENT	[M]
23	RHD30007-S	SCREW	[M]
24	RKA0095-K	LEG FELT	[M]
25	RFKHAPM35GCS	REAR CABINET ASS'Y	[M]
26	RGKX0062-S	DISPLAY WINDOW ORNAM	[M]
27	RGKX0063-S	MD LID	[M]
28	RGKX0064-S	MD ORNAMENT	[M]
29	RGKX0066	VOLUME RING ORNAMENT	[M]
30	RGLX0026-D	DISPLAY PANEL	[M]
31	RGFX0036-W	FRONT ORNAMENT	[M]
32	RXXX0028-K	HEAT SINK SUB UNIT	[M]
33	RKF0479-H2	CASS. HOLDER	[M]
34	RGFX0034-W	CASS LID ORNAMENT	[M]
35	RGUX0366-W	FAMILY MOULD BUTTON	[M]
36	RMNX0053	PCB SPACER	[M]
37	RMNX0033-W	LCD HOLDER	[M]
38	RMBX0012	MD LID SPRING	[M]
39	RMNX0037-K	LED COVER	[M]
40	XTB3+10JFZ	SCREW	[M]
41	RGKX0067-W	SENSOR WINDOW	[M]
42	RFKX0017	LCD LIGHTING PANEL	[M]
43	XTV3+8F	SCREW	[M]
45	RGUX0361-Q	FUNCTION BUTTON	[M]
46	RMN0091	SPACER	[M]
47	RGWX0052-Q	VOLUME KNOB	[M]
48	RGKX0065-W	VOLUME KNOB ORNAMENT	[M]
49	RKMX0053-S	SIDE PANEL (L)	[M]
50	RKMX0054-S	SIDE PANEL (R)	[M]
51	REEX0096	15P FFC	[M]
52	REXX0230-1	2P MAIN TO CR100	[M]
53	REXX0231	2P TAPE EJECT	[M]
54	REXX0232	9P TRANS TO POWER	[M]
55	RMKX0042-1	BOTTOM CHASSIS	[M]
56	RSCX0045	TUNER REAR SHIELD	[M]
57	RSCX0046	MD SHIELD	[M]
58	RSC0027-L	SHIELD CASE	[M]
61	RUS757ZAA	CASS HALF SPRING	[M]
62	RWJ0102050KR	MOTOR WIRE	[M]
63	RWJ0206150RR	6 PIN POWER AMP TO H	[M]
64	RWJ0207215XR	7 PIN MAIN TO MD LIN	[M]
65	RWJ0211090XQ	11 PIN DECK TO MAIN	[M]
66	RWJ1108085RR	8 PIN BACK LIGHT / L	[M]
67	RWJ1108165XQ	8 PIN DECK TO MAIN	[M]
68	RWJ1804270QX	4 PIN TRANS TO MAIN	[M]

17.5. Electrical Part list

Ref. No.	Part No.	Part Name & Description	Remarks
		PRINTED CIRCUIT CIRCUITS	
	REP2895A-T	MD SERVO P.C.B. SIDE A	[M] RTL
	REP2895A-T	MD SERVO P.C.B. SIDE B	[M] RTL
	REP2807C	CD SERVO P.C.B.	[M] RTL
	REPX0227C	MAIN P.C.B.	[M] RTL
	REPX0228C	SPEAKER P.C.B.	[M] RTL
	REPX0226A	FL P.C.B.	[M] RTL
	REPX0226A	PANEL P.C.B.	[M] RTL
	REPX0228C	DECK SWITCH P.C.B.	[M] RTL
	REPX0228C	DECK P.C.B.	[M] RTL
	REPX0228C	POWER P.C.B.	[M] RTL
	REPX0228C	TRANSFORMER P.C.B.	[M] RTL
	REPX0108	DECK MECHANISM P.C.B.	[M] RTL
	REPX0228C	HEADPHONE P.C.B.	[M] RTL
	REP2575A	MD SWITCH P.C.B.	[M] RTL
	REP1999B	TUNER PACK P.C.B.	[M] RTL
		INTEGRATED CIRCUITS	
IC1	AN8772FHQ	IC RF	[M]
IC2	AN8814SB-E1	IC	[M]
IC3	MN66616RA4	IC MSP LSI	[M]
IC4	AK4518VF-E2	IC AD/DA	[M]
IC5	RN5RG33AA-TL	IC REGULATOR	[M] △
IC6	TC7W04FTE12L	IC	[M]
IC9	RN5RZ26BA-TR	IC REGULATOR	[M] △
IC10	MN101D03DAA1	IC	[M]
IC11	TC74HCT00AFL	IC	[M]
IC72	M51V4400D7FS	IC 4M DRAM	[M]
IC92	LB1830MS-TLM	IC MOTOR DR	[M]
IC101	LA1833NMNTLM	IC IF & MPX	[M]
IC102	LC72131MDTRM	IC PLL	[M]
IC401	BD3861FS-E2	IC AUDIO	[M]
IC501	AN7135	IC POWER AMP	[M]
IC502	AN7194K-LD	IC BTC POWER	[M]
IC601	UPC29M33HF	IC	[M] △
IC701	AN8839NSBE2	IC HEAD AMP	[M]
IC702	MN662790RSC	IC LSI	[M]
IC703	BA5948FPE2	IC 4 CH DRIVE	[M]
IC801	M30622MC4A3F	IC MICOM	[M]
IC802	TC74HCT7007A	IC 3V TO 5V	[M]
IC902	BU2090AF-E2	IC I/O EXPANDER	[M]
IC971	0N2180RLC1	PHOTO INTERRUPTOR	[M]
IC1301	BA7755A	IC ANALOG SW	[M]
IC1302	TA8142AP	IC PB/REC PRE-AMP	[M]
IC1303	BA4558FE2	IC OP AMP	[M]
		TRANSISTORS	
Q1	2SB1295-6-TB	TRANSISTOR	[M]
Q1	2SK544F-AC	TRANSISTOR	[M]
Q2	2SC2786MTA	TRANSISTOR	[M]
Q2	DTC114YETL	TRANSISTOR	[M]
Q3	2SB1462STX	TRANSISTOR	[M]
Q3	2SC2787FL1TA	TRANSISTOR	[M]
Q4	2SC2787FL1TA	TRANSISTOR	[M]
Q5	2SB1295-6-TB	TRANSISTOR	[M]
Q6	DTC114YETL	TRANSISTOR	[M]
Q10	2SJ278MYTR	TRANSISTOR	[M]
Q11	2SK1764KYTR	TRANSISTOR	[M]
Q13	2SB1121ST-TD	TRANSISTOR	[M] △
Q101	2SC2058SPTA	TRANSISTOR	[M]
Q106	KRA102MTA	TRANSISTOR	[M]
Q403	KTC3875GRTA	TRANSISTOR	[M]
Q404	KTC3875GRTA	TRANSISTOR	[M]
Q405	KTC3875GRTA	TRANSISTOR	[M]
Q406	KTC3875GRTA	TRANSISTOR	[M]
Q407	2SJ498CTA	TRANSISTOR	[M]
Q408	KTC3875GRTA	TRANSISTOR	[M]
Q411	KTC3875GRTA	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q412	KTC3875GRTA	TRANSISTOR	[M]
Q501	2SD2144STA	TRANSISTOR	[M]
Q502	2SD2144STA	TRANSISTOR	[M]
Q542	KRA102MTA	TRANSISTOR	[M]
Q602	KRC102MTA	TRANSISTOR	[M]
Q603	KTC2026	TRANSISTOR	[M] △
Q604	KTC3199GRTA	TRANSISTOR	[M]
Q605	KRC119MTA	TRANSISTOR	[M]
Q606	2SA952LTA	TRANSISTOR	[M]
Q609	KTA1046	TRANSISTOR	[M] △
Q610	KTC3199GRTA	TRANSISTOR	[M]
Q611	2SD592ARTA	TRANSISTOR	[M] △
Q612	KRC101MTA	TRANSISTOR	[M]
Q613	KRA119MTA	TRANSISTOR	[M]
Q614	KRA119MTA	TRANSISTOR	[M]
Q615	KTA1046	TRANSISTOR	[M] △
Q616	KTC3199GRTA	TRANSISTOR	[M]
Q617	KTC3199GRTA	TRANSISTOR	[M]
Q618	KTA1046	TRANSISTOR	[M] △
Q619	KTC3199GRTA	TRANSISTOR	[M]
Q620	KRA110MTA	TRANSISTOR	[M]
Q701	2SA1037AKSTX	TRANSISTOR	[M]
Q701	KTC3875GRTA	TRANSISTOR	[M]
Q702	DTC143XKA146	TRANSISTOR	[M]
Q702	KTA1504GRTA	TRANSISTOR	[M]
Q703	DTA143XKA146	TRANSISTOR	[M]
Q703	KTC3875GRTA	TRANSISTOR	[M]
Q803	KRC104STA	TRANSISTOR	[M]
Q901	KRA119MTA	TRANSISTOR	[M]
Q902	KRC119MTA	TRANSISTOR	[M]
Q903	KRA119MTA	TRANSISTOR	[M]
Q904	KRC119MTA	TRANSISTOR	[M]
Q905	KRC119MTA	TRANSISTOR	[M]
Q906	KRA119MTA	TRANSISTOR	[M]
Q907	KRC119MTA	TRANSISTOR	[M]
Q908	KRA119MTA	TRANSISTOR	[M]
Q909	2SD592ARTA	TRANSISTOR	[M] △
Q911	KRC119MTA	TRANSISTOR	[M]
Q912	KTC3199GRTA	TRANSISTOR	[M]
Q913	2SA933SSTA	TRANSISTOR	[M]
Q914	KTC3199GRTA	TRANSISTOR	[M]
Q1101	2SJ498CTA	TRANSISTOR	[M]
Q1102	2SJ498CTA	TRANSISTOR	[M]
Q1103	KTC3199GRTA	TRANSISTOR	[M]
Q1104	KTC3199GRTA	TRANSISTOR	[M]
Q1105	2SJ498CTA	TRANSISTOR	[M]
Q1106	KRC113MTA	TRANSISTOR	[M]
Q1201	2SJ498CTA	TRANSISTOR	[M]
Q1202	2SJ498CTA	TRANSISTOR	[M]
Q1203	KTC3199GRTA	TRANSISTOR	[M]
Q1204	KTC3199GRTA	TRANSISTOR	[M]
Q1205	2SJ498CTA	TRANSISTOR	[M]
Q1206	KRC113MTA	TRANSISTOR	[M]
Q1302	2SC1845FTA	TRANSISTOR	[M]
Q1303	2SC200LLTA	TRANSISTOR	[M]
Q1304	KRC110MTA	TRANSISTOR	[M]
Q1305	KTC3199GRTA	TRANSISTOR	[M]
Q1306	KTC3199GRTA	TRANSISTOR	[M]
Q1307	KTC3199GRTA	TRANSISTOR	[M]
Q1308	KTC3199GRTA	TRANSISTOR	[M]
Q1309	KTC3199GRTA	TRANSISTOR	[M]
Q1310	KRC102MTA	TRANSISTOR	[M]
Q1311	KRC106MTA	TRANSISTOR	[M]
Q1313	KTC3199GRTA	TRANSISTOR	[M]
Q1317	KRA106MTA	TRANSISTOR	[M]
Q1318	KTC3199GRTA	TRANSISTOR	[M]
Q1319	2SD965RTA	TRANSISTOR	[M]
Q1320	2SB1030RTA	TRANSISTOR	[M]
Q1330	KTC3199GRTA	TRANSISTOR	[M]
		DIODES	
D1	SVC211SPA-AL	DIODE	[M]
D2	SVC211SPA-AL	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D3	SVC211SPA-AL	DIODE	[M]
D5	SC80209TE12R	DIODE	[M]
D6	SC80209TE12R	DIODE	[M]
D9	MA728TX	DIODE	[M]
D101	UDZSTE175R1B	DIODE	[M] △
D103	RL1N4003N02	DIODE	[M]
D401	1SS355TE17	DIODE	[M]
D534	RVD1SS133TA	DIODE	[M]
D535	RVD1SS133TA	DIODE	[M]
D538	RVD1SS133TA	DIODE	[M]
D542	RB441Q40T77	DIODE	[M]
D545	RVD1SS133TA	DIODE	[M]
D546	RB441Q40T77	DIODE	[M]
D547	MTZJ5R1BTA	DIODE	[M]
D548	RVD1SS133TA	DIODE	[M]
D601	RL1N4003N02	DIODE	[M]
D603	RL1N4003N02	DIODE	[M]
D605	MTZJ6R8ATA	DIODE	[M] △
D607	AK03WK	DIODE	[M] △
D608	AK03WK	DIODE	[M] △
D609	RL1N4003N02	DIODE	[M] △
D610	RL1N4003N02	DIODE	[M] △
D611	RVD1SS133TA	DIODE	[M]
D612	RVD1SS133TA	DIODE	[M]
D613	RVD1SS133TA	DIODE	[M]
D615	MTZJ16ATA	DIODE	[M] △
D616	RVD1SS133TA	DIODE	[M]
D617	RL1N4003N02	DIODE	[M] △
D618	RVD1SS133TA	DIODE	[M]
D619	RVD1SS133TA	DIODE	[M]
D620	SB360L6508	DIODE	[M] △
D621	RVD1SS133TA	DIODE	[M]
D622	SB360L6508	DIODE	[M] △
D624	SB360L6508	DIODE	[M] △
D625	SB360L6508	DIODE	[M] △
D626	MTZJ8R2CTA	DIODE	[M] △
D627	RL1N4003N02	DIODE	[M]
D628	MTZJ5R6BTA	DIODE	[M]
D629	AK03WK	DIODE	[M] △
D630	AK03WK	DIODE	[M] △
D750	MA8056MTX	DIODE	[M]
D801	1SS380TE-17	DIODE	[M]
D802	1SS380TE-17	DIODE	[M]
D803	1SS355TE17	DIODE	[M]
D804	1SS355TE17	DIODE	[M]
D805	1SS380TE-17	DIODE	[M]
D806	1SS380TE-17	DIODE	[M]
D807	DAP202KT146	DIODE	[M]
D808	DAP202KT146	DIODE	[M]
D809	RL1N4003N02	DIODE	[M]
D901	NSPW510BS	DIODE	[M]
D902	NSPW510BS	DIODE	[M]
D903	NSPW510BS	DIODE	[M]
D904	SLR325MCT31W	DIODE	[M]
D905	SLR325MCT31W	DIODE	[M]
D906	SLR325MCT31W	DIODE	[M]
D907	SML79455C	DIODE	[M]
D908	SML79455C	DIODE	[M]
D909	SML79455C	DIODE	[M]
D910	SML79455C	DIODE	[M]
D911	MTZJ3R9BTA	DIODE	[M] △
D912	SLR325MCT31W	DIODE	[M]
D913	SLR325MCT31W	DIODE	[M]
D914	RVD1SS133TA	DIODE	[M]
D915	RVD1SS133TA	DIODE	[M]
D916	SLC-22VR	DIODE	[M]
D917	MTZJ8R2BTA	DIODE	[M]
D918	RVD1SS133TA	DIODE	[M]
D919	MTZJ8R2BTA	DIODE	[M]
D920	MTZJ8R2BTA	DIODE	[M]
D971	MA165TA	DIODE	[M]
D1301	RVD1SS133TA	DIODE	[M]
D1303	RVD1SS133TA	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		VARIABLE RESISTORS	
VR1	EVM3YSX50B14	VR	[M]
VR901	EVEKE2F2024B	VR VOLUME JOG	[M]
		SWITCHES	
S1	RSH1A91ZA-A	SW CD	[M]
S2	RSH1A91ZA-A	SW CD	[M]
S3	RSH1A044-1A	SW OPEN	[M]
S4	RSH1A91ZA-A	SW CD	[M]
S5	RSH1A044-1A	SW OPEN	[M]
S6	RSH1A044-1A	SW OPEN	[M]
S7	RSH1A045-1A	SW TRIGGER	[M]
S8	RSP1A023-A	SW TRV-IN	[M]
S701	RSH1A048-A	SW RESET	[M]
S780	RSH1A049-U	OPEN SWITCH	[M]
S920	EVQ21405R	SW POWER	[M]
S922	EVQ21405R	SW DISPLAY/CHARACTER	[M]
S923	EVQ21405R	SW REC MODE	[M]
S924	EVQ21405R	SW MD & TAPE REC	[M]
S925	EVQ21405R	SW TAPE REC	[M]
S926	EVQ21405R	SW MD REC	[M]
S932	EVQ21405R	SW OPEN/CLOSE	[M]
S933	EVQ21405R	SW EJECT	[M]
S934	EVQ21405R	SW STOP	[M]
S935	EVQ21405R	SW FF	[M]
S936	EVQ21405R	SW REW	[M]
S937	EVQ21405R	SW SELECTOR	[M]
S938	EVQ21405R	SW SOUND EQ	[M]
S939	EVQ21405R	SW CD	[M]
S940	EVQ21405R	SW MD	[M]
S941	EVQ21405R	SW TAPE	[M]
S942	EVQ21405R	SW TUNER	[M]
S950	EVQ21405R	SW DECK OPEN	[M]
S971	RSH1A018-3U	MODE SWITCH	[M]
S972	RSH1A019-2U	SW, LEAF	[M]
S973	RSH1A019-2U	SW, LEAF	[M]
S974	RSH1A019-2U	SW, LEAF	[M]
S975	RSH1A019-2U	SW, LEAF	[M]
		CONNECTORS	
CN1	RJS2A4526T	CONNECTOR	[M]
CN4	RJS2A4830T	CONNECTOR	[M]
CN6	RJU113W10M	10P CONNECTOR	[M]
CN8	RJS2A4506T	6P CONNECTOR	[M]
CN101	RJS2A5630	CONNECTOR	[M]
CN501A	RJP8G9YA	10P CONNECTOR	[M]
CN501B	SJS50878JQ	8P BTB CONNECTOR	[M]
CN502A	RJU057G12	12P BTB CONNECTOR	[M]
CN502B	RJT057G12	12P BTB CONNECTOR	[M]
CN502C	RJT057G12	12P BTB CONNECTOR	[M]
CN502D	RJU057G12	12P BTB CONNECTOR	[M]
CN503A	RJU057G12	12P BTB CONNECTOR	[M]
CN503B	RJT057G12	12P BTB CONNECTOR	[M]
CN503C	RJT057G12	12P BTB CONNECTOR	[M]
CN503D	RJU057G12	12P BTB CONNECTOR	[M]
CN505	RJS1A5206	TO TUNER PCB	[M]
CN603	RJS1A6604T1	4P TAPING CONNECTOR	[M]
CN604	RJP9G4YA	CONNECTOR	[M]
CN701	RJS1A9419	FFC CONNECTOR	[M]
CN701	RJS2A8616	16P FFC CONNECTOR	[M]
CN702	RJS1A9319	19P FFC CONNECTOR	[M]
CN901A	RJS1A9416	16P FFC CONNECTOR	[M]
CN901B	RJS1A9316	16P FFC CP	[M]
CN904	RJS1A5207	7P CONNECTOR	[M]
CN1301	RJS11T7ZA	CONNECTOR	[M]
CN1303	RJS8T7ZA	8P CONNECTOR	[M]
CP6	RJT113W10M	10P CONNECOR	[M]
CP910	RJT029W002-1	SP CONNECTOR	[M]
CP1301	RJS1A6805-J	CONNECTOR	[M]
CP1902	RJT071K09A	CONNECTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
CS971	RJU071H09M1	CONNECTOR	[M]
		COILS & TRANSFORMERS	
L1	RLQU100KT-W	CHIP COIL	[M]
L1	RLQZP1R2JT-Y	RF CHOKE COIL	[M]
L2	RLQU101KT-W	CHIP COIL	[M]
L2	RLQZPR47KT-Y	RF CHOKE COIL	[M]
L3	RLQU101KT-W	CHIP COIL	[M]
L4	RLQU2R2MT-W	CHIP COIL	[M]
L5	RLQU2R2MT-W	CHIP COIL	[M]
L6	RLQU2R2MT-W	CHIP COIL	[M]
L7	RLQU2R2MT-W	CHIP COIL	[M]
L8	RLQU2R2MT-W	CHIP COIL	[M]
L9	RLQU100KT-W	CHIP COIL	[M]
L10	RLQU100KT-W	CHIP COIL	[M]
L11	RLQU100KT-W	CHIP COIL	[M]
L12	RLQU100KT-W	CHIP COIL	[M]
L13	RLQU2R2MT-W	CHIP COIL	[M]
L14	RLQU2R2MT-W	CHIP COIL	[M]
L15	RLQU100KT-W	CHIP COIL	[M]
L16	RLQU2R2MT-W	CHIP COIL	[M]
L17	RLQP1R8KT2-Y	CHIP COIL	[M]
L18	RLQP1R8KT2-Y	CHIP COIL	[M]
L101	RLQBR39KT-1Y	COIL	[M]
L102	RLQBR39KT-1Y	COIL	[M]
L601	RLQZ371	CHOKE COIL	[M] △
L751	RLQB270KT-1Y	COIL	[M]
L752	RL500050T-Y	RF CHOKE COIL	[M]
L753	RLQB270KT-1Y	COIL	[M]
L754	RLQB270KT-1Y	COIL	[M]
L755	RLQB101KT-1Y	COIL	[M]
L756	RLQB101KT-1Y	COIL	[M]
L760	RL500050T-Y	RF CHOKE COIL	[M]
L801	RLQB3R3KT-1Y	COIL	[M]
L901	RL500050T-Y	RF CHOKE COIL	[M]
L902	RL500050T-Y	RF CHOKE COIL	[M]
L907	RLQA3R3JT1-Y	AXIAL COIL	[M]
L1301	RL08B003-K	BIAS OSC COIL	[M]
L1303	RLQA470JT1-Y	AXIAL COIL	[M]
T601	RTP2W3E001	TRANSFORMER	[M] △
T602	RTP1H3E001	BACK UP TRANSFORMER	[M] △
		COMPONENT COMBINATIO	
Z101	RLA2Z006M-T	ANT COIL BLOCK	[M]
Z102	RLI2Z021M-T	AM IF BLOCK	[M]
Z601	ERZV10V511CS	ZENER	[M]
Z901	RSL5267-E	LCD	[M]
Z902	RCDGPLU26XV	REMOTE SENSOR	[M]
Z971	EXBF7L355SYV	RADA RESISTOR	[M]
		CERAMIC FILTERS	
CF201	RLFFETWN02DD	CERAMIC FILTER	[M]
CF202	RLFFETWN02DD	CERAMIC FILTER	[M]
		RELAY	
RLY601	RSY0040M-0	RELAY	[M] △
		OSCILLATORS	
X1	RSXY10M0M02T	CRYSTAL OSCILLATOR	[M]
X2	RSXC16M9S03T	CRYSTAL OSCILLATOR	[M]
X102	RLPDFT22DD	CRYSTAL OSCILLATOR	[M]
X103	RSXC7M20S05T	CRYSTAL OSCILLATOR	[M]
X701	RSXC33M8S01	CRYSTAL OSCILLATOR	[M]
X801	RSXZ8M00D01T	CERAMIC RESONATOR	[M]
X802	RSXD32K0C01	CRYSTAL OSCILLATOR	[M]
		FUSES	

Ref. No.	Part No.	Part Name & Description	Remarks
F601	XBA2C06TB0	FUSE	[M] △
		FUSE HOLDERS	
FC601	EYF52BC	FUSE HOLDER	[M]
FC602	EYF52BC	FUSE HOLDER	[M]
		FUSE PROTECTOR	
FP501	RSFMB20KT-L	PROTECTOR	[M] △
FP502	RSFMB50KT-L	PROTECTOR	[M] △
FP601	RSFMB50KT-L	PROTECTOR	[M] △
FP602	RSFMB50KT-L	PROTECTOR	[M] △
		THERMISTOR	
TH1	RRSP33J103CW	THERMISTOR	[M]
WH505	RMR0315	6P WIRE HOLDER	[M]
WH603	RJS1A5504	CABLE HOLDER	[M]
WH604	RJS1A5509	9P WIRE HOLDER	[M]
WH904	RMR0316	7P WIRE HOLDER	[M]
WH905A	RMR0317	8P WIRE HOLDER	[M]
WH905B	RMR0317	8P WIRE HOLDER	[M]
		JACKS	
JK101	RJH5404-1J	JK 4P ANT TERMINAL	[M]
JK401	RJH2213N	JK 2P RCA	[M]
JK501	RJH5416-1	JK BLUE/GRAY SPEAKER	[M]
JK502	RJH5415-1	JK RED/BLACK SPEAKER	[M]
JK503	RJ39T01	JK MIC	[M]
JK601	SJS9236-1	JK AC INLET	[M] △
JK901	RJ36TA03-C	JK MD LINK	[M]
		EARTH TERMINAL	
E501	SNE1004-2	EARTH TERMINAL	[M]
		WIRES	
PWL301	RMR0320	HOLDER	[M]
PWL303	RMR0317	8P WIRE HOLDER	[M]
		RESISTORS	
R1	ERDS2TJ104T	100K 1/4W	[M]
R1	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2	ERDS2TJ104T	100K 1/4W	[M]
R2	ERJ3GEYJ102V	1K 1/16W	[M]
R3	ERDS2TJ221T	220 1/4W	[M]
R3	ERJ3GEYJ472V	4.7K 1/16W	[M]
R4	ERDS2TJ104T	100K 1/4W	[M]
R5	ERDS2TJ564T	560K 1/4W	[M]
R5	ERJ3GEYJ1R0V	1 1/16W	[M]
R6	ERDS2TJ391T	390 1/4W	[M]
R6	ERJ3GEYJ472V	4.7K 1/16W	[M]
R7	ERDS2TJ272T	2.7K 1/4W	[M]
R8	ERDS2TJ684T	680K 1/4W	[M]
R8	ERJ3GEYJ271V	270 1/16W	[M]
R9	ERDS2TJ391T	390 1/4W	[M]
R10	ERDS2TJ391T	390 1/4W	[M]
R10	ERJ3GEYJ474V	470K 1/16W	[M]
R11	ERDS2TJ684T	680K 1/4W	[M]
R11	ERJ3GEYJ101V	100 1/16W	[M]
R12	ERJ3GEYJ223V	22K 1/16W	[M]
R13	ERJ6GEYJ3R3V	3.3 1/10W	[M]
R14	ERA3YED103V	10K 3W	[M]
R15	ERJ3GEYJ223V	22K 1/16W	[M]
R16	ERJ3GEYJ104V	100K 1/16W	[M]
R17	ERJ3GEYJ223V	22K 1/16W	[M]
R18	ERJ3GEYJ103V	10K 1/16W	[M]
R19	ERJ3GEYJ102V	1K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R20	ERJ3GEYJ473V	47K 1/16W	[M]
R21	ERJ3GEYJ223V	22K 1/16W	[M]
R22	ERJ3GEY0R00V	0 1/16W	[M]
R23	ERJ3GEYJ272V	2.7K 1/16W	[M]
R24	ERJ3GEYJ473V	47K 1/16W	[M]
R25	ERJ3GEYJ104V	100K 1/16W	[M]
R26	ERJ3GEYJ473V	47K 1/16W	[M]
R28	ERJ3GEYJ473V	47K 1/16W	[M]
R29	ERJ3GEYJ473V	47K 1/16W	[M]
R30	ERJ3GEYJ102V	1K 1/16W	[M]
R31	ERJ3GEYJ223V	22K 1/16W	[M]
R32	ERJ3GEYJ473V	47K 1/16W	[M]
R34	ERJ3GEYJ272V	2.7K 1/16W	[M]
R35	ERJ3GEYJ183V	18K 1/16W	[M]
R36	ERJ3GEYJ273V	27K 1/16W	[M]
R37	ERJ3GEYJ333V	33K 1/16W	[M]
R38	ERJ3GEYJ223V	22K 1/16W	[M]
R42	ERJ3GEYJ102V	1K 1/16W	[M]
R43	ERJ3GEYJ222V	2.2K 1/16W	[M]
R44	ERJ3GEYJ223V	22K 1/16W	[M]
R45	ERJ3GEYJ333V	33K 1/16W	[M]
R46	ERJ3GEYJ222V	2.2K 1/16W	[M]
R47	ERJ3GEYJ473V	47K 1/16W	[M]
R50	ERJ3GEYJ102V	1K 1/16W	[M]
R55	ERJ3GEYJ332V	3.3K 1/16W	[M]
R56	ERJ3GEYJ223V	22K 1/16W	[M]
R58	ERJ3GEYJ682V	6.8K 1/16W	[M]
R59	ERJ3GEYJ683V	68K 1/16W	[M]
R60	ERJ3GEYJ332V	3.3K 1/16W	[M]
R61	ERJ3GEYJ223V	22K 1/16W	[M]
R62	ERJ3GEYJ223V	22K 1/16W	[M]
R63	ERJ3GEYJ103V	10K 1/16W	[M]
R64	ERJ3GEYJ471V	470 1/16W	[M]
R65	ERJ3GEYJ471V	470 1/16W	[M]
R66	ERJ3GEYJ471V	470 1/16W	[M]
R67	ERJ3GEYJ102V	1K 1/16W	[M]
R70	ERJ3GEYJ102V	1K 1/16W	[M]
R71	ERJ3GEYJ220V	22 1/16W	[M]
R72	ERJ3GEYJ220V	22 1/16W	[M]
R73	ERJ3GEYJ393V	39K 1/16W	[M]
R74	ERJ3GEYJ822V	8.2K 1/16W	[M]
R75	ERJ3GEYJ223V	22K 1/16W	[M]
R76	ERJ3GEYJ100V	10 1/16W	[M]
R77	ERJ3GEYJ223V	22K 1/16W	[M]
R78	ERJ3GEYJ102V	1K 1/16W	[M]
R79	ERJ3GEYJ102V	1K 1/16W	[M]
R80	ERJ3GEYJ102V	1K 1/16W	[M]
R81	ERJ3GEYJ223V	22K 1/16W	[M]
R82	ERJ3GEYJ473V	47K 1/16W	[M]
R83	ERJ3GEYJ105V	1M 1/16W	[M]
R84	ERJ3GEYJ153V	15K 1/16W	[M]
R85	ERJ3GEYJ223V	22K 1/16W	[M]
R86	ERJ3GEYJ102V	1K 1/16W	[M]
R87	ERJ3GEYJ102V	1K 1/16W	[M]
R89	ERJ3GEYJ102V	1K 1/16W	[M]
R90	ERJ3GEYJ102V	1K 1/16W	[M]
R93	ERJ3GEYJ102V	1K 1/16W	[M]
R95	ERJ3GEYJ222V	2.2K 1/16W	[M]
R98	ERJ3GEYJ102V	1K 1/16W	[M]
R99	ERJ3GEYJ102V	1K 1/16W	[M]
R100	ERJ3GEYJ473V	47K 1/16W	[M]
R102	ERJ6GEYJ472V	4.7K 1/10W	[M]
R103	ERJ3GEYJ102V	1K 1/16W	[M]
R103	ERJ6GEYJ271V	270 1/10W	[M]
R104	ERJ3GEYJ272V	2.7K 1/16W	[M]
R104	ERJ6GEYJ102V	1K 1/10W	[M]
R105	ERJ3GEYJ272V	2.7K 1/16W	[M]
R105	ERJ6GEYJ471V	470 1/10W	[M]
R106	ERJ6GEYJ474V	470K 1/10W	[M]
R107	ERJ3GEYJ102V	1K 1/16W	[M]
R107	ERJ6GEYJ331V	330 1/10W	[M]
R108	ERJ3GEYJ102V	1K 1/16W	[M]
R109	ERJ3GEYJ102V	1K 1/16W	[M]
R110	ERJ3GEYJ102V	1K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R110	ERJ6GEYJ102V	1K 1/10W	[M]
R111	ERJ3GEYJ221V	220 1/16W	[M]
R111	ERJ6GEYJ391V	390 1/10W	[M]
R112	ERJ3GEYJ221V	220 1/16W	[M]
R112	ERJ6GEYJ104V	100K 1/10W	[M]
R113	ERJ6GEYJ103V	10K 1/10W	[M]
R114	ERJ3GEYJ103V	10K 1/16W	[M]
R114	ERJ6GEYJ562V	5.6K 1/10W	[M]
R115	ERJ3GEYJ103V	10K 1/16W	[M]
R115	ERJ6GEYJ561V	560 1/10W	[M]
R116	ERJ3GEYJ101V	100 1/16W	[M]
R116	ERJ6GEYJ102V	1K 1/10W	[M]
R117	ERJ3GEYJ101V	100 1/16W	[M]
R117	ERJ6GEYJ473V	47K 1/10W	[M]
R118	ERJ3GEYJ102V	1K 1/16W	[M]
R118	ERJ6GEYJ332V	3.3K 1/10W	[M]
R119	ERJ3GEYJ101V	100 1/16W	[M]
R119	ERJ6GEYJ472V	4.7K 1/10W	[M]
R120	ERJ3GEYJ101V	100 1/16W	[M]
R120	ERJ6GEYJ473V	47K 1/10W	[M]
R121	ERJ3GEYJ272V	2.7K 1/16W	[M]
R121	ERJ6GEYJ223V	22K 1/10W	[M]
R122	ERJ3GEYJ272V	2.7K 1/16W	[M]
R122	ERJ6GEYJ272V	2.7K 1/10W	[M]
R123	ERJ3GEYJ102V	1K 1/16W	[M]
R123	ERJ6GEYJ683V	68K 1/10W	[M]
R124	ERJ3GEYJ473V	47K 1/16W	[M]
R124	ERJ6GEYJ330V	33 1/10W	[M]
R125	ERJ3GEYJ473V	47K 1/16W	[M]
R125	ERJ6GEYJ471V	470 1/10W	[M]
R126	ERJ6GEYJ152V	1.5K 1/10W	[M]
R127	ERJ6GEYJ471V	470 1/10W	[M]
R128	ERJ6GEYJ820V	82 1/10W	[M]
R129	ERJ6GEYJ273V	27K 1/10W	[M]
R130	ERJ3GEYJ272V	2.7K 1/16W	[M]
R130	ERJ6GEYJ103V	10K 1/10W	[M]
R131	ERJ3GEYJ101V	100 1/16W	[M]
R131	ERJ8GEYJ680V	68 1/8W	[M]
R132	ERJ3GEYJ272V	2.7K 1/16W	[M]
R132	ERJ6GEYJ103V	10K 1/10W	[M]
R133	ERJ6GEYJ102V	1K 1/10W	[M]
R134	ERJ3GEYJ272V	2.7K 1/16W	[M]
R134	ERJ6GEYJ471V	470 1/10W	[M]
R135	ERJ3GEYJ272V	2.7K 1/16W	[M]
R135	ERJ6GEYJ102V	1K 1/10W	[M]
R136	ERJ6GEYJ102V	1K 1/10W	[M]
R137	ERJ3GEYJ103V	10K 1/16W	[M]
R137	ERJ6GEYJ102V	1K 1/10W	[M]
R138	ERJ6GEYJ332V	3.3K 1/10W	[M]
R141	ERJ6GEYJ103V	10K 1/10W	[M]
R142	ERJ6GEYJ103V	10K 1/10W	[M]
R143	ERJ6GEYJ223V	22K 1/10W	[M]
R145	ERJ3GEYJ221V	220 1/16W	[M]
R145	ERJ6GEYJ472V	4.7K 1/10W	[M]
R146	ERJ3GEYJ221V	220 1/16W	[M]
R146	ERJ6GEYJ472V	4.7K 1/10W	[M]
R147	ERJ3GEYJ102V	1K 1/16W	[M]
R151	ERJ6GEYJ820V	82 1/10W	[M]
R152	ERJ6GEY0R00A	0 1/10W	[M]
R174	ERJ3GEYJ103V	10K 1/16W	[M]
R401	ERJ6GEYJ223V	22K 1/10W	[M]
R402	ERJ6GEYJ223V	22K 1/10W	[M]
R403	ERJ6GEYJ182V	1.8K 1/10W	[M]
R404	ERJ6GEYJ182V	1.8K 1/10W	[M]
R409	ERJ6GEYJ332V	3.3K 1/10W	[M]
R410	ERJ6GEYJ332V	3.3K 1/10W	[M]
R411	ERJ6GEYJ392V	3.9K 1/10W	[M]
R412	ERJ6GEYJ392V	3.9K 1/10W	[M]
R413	ERJ6GEYJ472V	4.7K 1/10W	[M]
R414	ERJ6GEYJ472V	4.7K 1/10W	[M]
R415	ERJ6GEYJ562V	5.6K 1/10W	[M]
R416	ERJ6GEYJ272V	2.7K 1/10W	[M]
R418	ERJ6GEYJ562V	5.6K 1/10W	[M]
R421	ERJ6GEYJ472V	4.7K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R422	ERJ6GEYJ472V	4.7K 1/10W	[M]
R423	ERJ6GEYJ103V	10K 1/10W	[M]
R424	ERJ6GEYJ103V	10K 1/10W	[M]
R425	ERJ6GEYJ562V	5.6K 1/10W	[M]
R426	ERJ6GEYJ562V	5.6K 1/10W	[M]
R427	ERJ6GEYJ392V	3.9K 1/10W	[M]
R428	ERJ6GEYJ392V	3.9K 1/10W	[M]
R431	ERD2FCVG330T	33 1/4W	[M]
R434	ERJ6GEYJ182V	1.8K 1/10W	[M]
R435	ERJ6GEYJ182V	1.8K 1/10W	[M]
R436	ERJ6GEYJ682V	6.8K 1/10W	[M]
R437	ERJ6GEYJ682V	6.8K 1/10W	[M]
R438	ERJ6GEYJ153V	15K 1/10W	[M]
R439	ERJ6GEYJ472V	4.7K 1/10W	[M]
R440	ERJ6GEYJ183V	18K 1/10W	[M]
R441	ERJ6GEYJ183V	18K 1/10W	[M]
R442	ERJ6GEYJ472V	4.7K 1/10W	[M]
R443	ERJ6GEYJ472V	4.7K 1/10W	[M]
R445	ERJ6GEYJ472V	4.7K 1/10W	[M]
R446	ERJ6GEYJ472V	4.7K 1/10W	[M]
R447	ERJ6GEYJ473V	47K 1/10W	[M]
R448	ERJ6GEYJ473V	47K 1/10W	[M]
R449	ERJ6GEYJ472V	4.7K 1/10W	[M]
R450	ERJ6GEYJ472V	4.7K 1/10W	[M]
R451	ERJ6GEYJ223V	22K 1/10W	[M]
R452	ERJ6GEYJ223V	22K 1/10W	[M]
R453	ERJ6GEYJ104V	100K 1/10W	[M]
R454	ERJ6GEYJ104V	100K 1/10W	[M]
R455	ERJ6GEYJ472V	4.7K 1/10W	[M]
R456	ERJ6GEYJ472V	4.7K 1/10W	[M]
R457	ERJ6GEYJ153V	15K 1/10W	[M]
R458	ERJ6GEYJ153V	15K 1/10W	[M]
R459	ERJ6GEYJ222V	2.2K 1/10W	[M]
R460	ERJ6GEYJ222V	2.2K 1/10W	[M]
R461	ERJ6GEYJ473V	47K 1/10W	[M]
R462	ERJ6GEYJ473V	47K 1/10W	[M]
R463	ERJ6GEYJ102V	1K 1/10W	[M]
R464	ERJ6GEYJ335V	3.3M 1/10W	[M]
R465	ERJ6GEYJ103V	10K 1/10W	[M]
R466	ERJ6GEYJ105V	1M 1/10W	[M]
R467	ERJ6GEYJ822V	8.2K 1/10W	[M]
R468	ERJ6GEYJ822V	8.2K 1/10W	[M]
R469	ERJ6GEYJ823V	82K 1/10W	[M]
R471	ERJ6GEYJ822V	8.2K 1/10W	[M]
R481	ERJ6GEYJ183V	18K 1/10W	[M]
R482	ERJ6GEYJ183V	18K 1/10W	[M]
R501	ERDS2TJ2R2T	2.2 1/4W	[M]
R502	ERDS2TJ2R2T	2.2 1/4W	[M]
R503	ERDS2TJ2R2T	2.2 1/4W	[M]
R504	ERDS2TJ2R2T	2.2 1/4W	[M]
R509	ERDS2TJ102T	1K 1/4W	[M]
R510	ERDS2TJ472T	4.7K 1/4W	[M]
R513	ERDS2TJ101T	100 1/4W	[M]
R514	ERDS2TJ101T	100 1/4W	[M]
R515	ERDS2TJ682T	6.8K 1/4W	[M]
R516	ERDS2TJ682T	6.8K 1/4W	[M]
R517	ERDS2TJ102T	1K 1/4W	[M]
R518	ERDS2TJ102T	1K 1/4W	[M]
R519	ERDS2TJ1R2T	1.2 1/4W	[M]
R520	ERDS2TJ1R2T	1.2 1/4W	[M]
R521	ERDS2TJ1R0T	1 1/4W	[M]
R522	ERDS2TJ1R0T	1 1/4W	[M]
R535	ERDS2TJ222T	2.2K 1/4W	[M]
R536	ERDS2TJ332T	3.3K 1/4W	[M]
R539	ERDS2TJ333T	33K 1/4W	[M]
R540	ERDS2TJ222T	2.2K 1/4W	[M]
R544	ERDS2TJ154T	150K 1/4W	[M]
R545	ERDS2TJ333T	33K 1/4W	[M]
R564	ERDS2TJ122T	1.2K 1/4W	[M]
R569	ERDS2TJ104T	100K 1/4W	[M]
R592	ERDS2TJ681T	680 1/4W	[M]
R593	ERDS2TJ681T	680 1/4W	[M]
R594	ERDS2TJ820T	82 1/4W	[M]
R595	ERDS2TJ820T	82 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R596	ERDS2TJ100T	10 1/4W	[M]
R597	ERDS2TJ100T	10 1/4W	[M]
R601	ERDS1FVJ180T	18 1/2W	[M] △
R605	ERDS2TJ103T	10K 1/4W	[M]
R609	ERDS2TJ151T	150 1/4W	[M]
R610	ERDS2TJ681T	680 1/4W	[M]
R611	ERDS2TJ152T	1.5K 1/4W	[M]
R612	ERDS2TJ472T	4.7K 1/4W	[M]
R613	ERDS2TJ473T	47K 1/4W	[M]
R614	ERDS2TJ473T	47K 1/4W	[M]
R615	ERDS2TJ331T	330 1/4W	[M]
R616	ERDS2TJ223T	22K 1/4W	[M]
R617	ERDS2TJ101T	100 1/4W	[M]
R618	ERDS2TJ151T	150 1/4W	[M]
R621	ERDS2TJ122T	1.2K 1/4W	[M]
R622	ERD2FCVG220T	22 1/4W	[M] △
R623	ERDS2TJ152T	1.5K 1/4W	[M]
R624	ERDS2TJ152T	1.5K 1/4W	[M]
R627	ERDS2TJ221T	220 1/4W	[M]
R628	ERDS2TJ221T	220 1/4W	[M]
R629	ERDS2TJ561T	560 1/4W	[M]
R630	ERDS2TJ104T	100K 1/4W	[M]
R631	ERDS2TJ104T	100K 1/4W	[M]
R633	ERDS2TJ222T	2.2K 1/4W	[M]
R634	ERDS2TJ1R2T	1.2 1/4W	[M]
R635	ERDS2TJ1R2T	1.2 1/4W	[M]
R636	ERDS2TJ1R2T	1.2 1/4W	[M]
R637	ERDS2TJ122T	1.2K 1/4W	[M]
R638	ERDS2TJ272T	2.7K 1/4W	[M]
R639	ERDS2TJ101T	100 1/4W	[M]
R652	ERDS2TJ103T	10K 1/4W	[M]
R701	ERJ6GEYJ102V	1K 1/10W	[M]
R701	ERJ6GEYJ4R7V	4.7 1/10W	[M]
R702	ERJ6GEYJ101V	100 1/10W	[M]
R702	ERJ6GEYJ103V	10K 1/10W	[M]
R704	ERJ6GEYJ102V	1K 1/10W	[M]
R705	ERJ6GEYJ102V	1K 1/10W	[M]
R705	ERJ6GEYJ154V	150K 1/10W	[M]
R706	ERJ6GEYJ102V	1K 1/10W	[M]
R707	ERJ6GEYJ102V	1K 1/10W	[M]
R707	ERJ6GEYJ393V	39K 1/10W	[M]
R708	ERJ6GEYJ103V	10K 1/10W	[M]
R708	ERJ6GEYJ223V	22K 1/10W	[M]
R709	ERJ6GEYJ472V	4.7K 1/10W	[M]
R709	ERJ6GEYJ683V	68K 1/10W	[M]
R710	ERJ6GEYJ472V	4.7K 1/10W	[M]
R711	ERJ6GEYJ103V	10K 1/10W	[M]
R711	ERJ6GEYJ823V	82K 1/10W	[M]
R712	ERJ6GEYJ103V	10K 1/10W	[M]
R712	ERJ8GEYJ221V	220 1/8W	[M]
R713	ERJ6GEYJ472V	4.7K 1/10W	[M]
R714	ERJ6GEYJ472V	4.7K 1/10W	[M]
R714	ERJ6GEYJ682V	6.8K 1/10W	[M]
R715	ERJ6GEYJ102V	1K 1/10W	[M]
R715	ERJ6GEYJ472V	4.7K 1/10W	[M]
R716	ERJ6GEYJ103V	10K 1/10W	[M]
R717	ERJ6GEYJ102V	1K 1/10W	[M]
R717	ERJ6GEYJ103V	10K 1/10W	[M]
R718	ERJ6GEYJ102V	1K 1/10W	[M]
R718	ERJ6GEYJ103V	10K 1/10W	[M]
R721	ERJ6GEYJ101V	100 1/10W	[M]
R723	ERJ6GEYJ103V	10K 1/10W	[M]
R724	ERJ6GEYJ153V	15K 1/10W	[M]
R725	ERJ6GEYJ681V	680 1/10W	[M]
R727	ERJ6GEYJ272V	2.7K 1/10W	[M]
R728	ERJ6GEYJ222V	2.2K 1/10W	[M]
R729	ERJ6GEYJ272V	2.7K 1/10W	[M]
R731	ERJ6GEYJ103V	10K 1/10W	[M]
R732	ERJ6GEYJ102V	1K 1/10W	[M]
R735	ERJ6GEYJ101V	100 1/10W	[M]
R736	ERJ6GEYJ101V	100 1/10W	[M]
R741	ERJ6GEYJ473V	47K 1/10W	[M]
R742	ERJ6GEYJ224V	220K 1/10W	[M]
R744	ERJ6GEYJ124V	120K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R749	ERJ6GEYJ272V	2.7K 1/10W	[M]
R750	ERJ6GEYJ151V	150 1/10W	[M]
R751	ERJ6GEYJ562V	5.6K 1/10W	[M]
R752	ERJ6GEYJ222V	2.2K 1/10W	[M]
R753	ERJ6GEYJ100V	10 1/10W	[M]
R754	ERJ6GEYJ102V	1K 1/10W	[M]
R754	ERJ8GEYJ5R6V	5.6 1/8W	[M]
R756	ERJ6GEYJ103V	10K 1/10W	[M]
R757	ERJ6GEYJ472V	4.7K 1/10W	[M]
R758	ERJ6GEYJ472V	4.7K 1/10W	[M]
R759	ERJ6GEYJ102V	1K 1/10W	[M]
R760	ERJ6GEYJ221V	220 1/10W	[M]
R760	ERJ6GEYJ472V	4.7K 1/10W	[M]
R761	ERJ6GEYJ103V	10K 1/10W	[M]
R763	ERJ6GEYJ103V	10K 1/10W	[M]
R764	ERJ6GEYJ103V	10K 1/10W	[M]
R765	ERJ6GEYJ103V	10K 1/10W	[M]
R766	ERJ6GEYJ102V	1K 1/10W	[M]
R767	ERJ6GEYJ103V	10K 1/10W	[M]
R768	ERD2FCVG100T	10 1/4W	[M]
R808	ERJ6GEYJ473V	47K 1/10W	[M]
R810	ERJ6GEYJ334V	330K 1/10W	[M]
R811	ERJ6GEYJ681V	680 1/10W	[M]
R812	ERJ6GEYJ103V	10K 1/10W	[M]
R813	ERJ6GEYJ223V	22K 1/10W	[M]
R814	ERJ6GEYJ471V	470 1/10W	[M]
R815	ERJ6GEYJ101V	100 1/10W	[M]
R816	ERJ6GEYJ101V	100 1/10W	[M]
R817	ERJ6GEYJ106V	10M 1/10W	[M]
R818	ERJ6GEYJ472V	4.7K 1/10W	[M]
R819	ERJ6GEYJ472V	4.7K 1/10W	[M]
R820	ERJ6GEYJ473V	47K 1/10W	[M]
R821	ERJ6GEYJ473V	47K 1/10W	[M]
R822	ERJ6GEYJ473V	47K 1/10W	[M]
R823	ERJ6GEYJ473V	47K 1/10W	[M]
R826	ERJ6GEYJ101V	100 1/10W	[M]
R827	ERJ6GEYJ473V	47K 1/10W	[M]
R828	ERJ6GEYJ103V	10K 1/10W	[M]
R829	ERJ6GEYJ473V	47K 1/10W	[M]
R830	ERJ6GEYJ472V	4.7K 1/10W	[M]
R831	ERJ6GEYJ221V	220 1/10W	[M]
R832	ERJ6GEYJ223V	22K 1/10W	[M]
R833	ERJ6GEYJ223V	22K 1/10W	[M]
R834	ERJ6GEYJ104V	100K 1/10W	[M]
R835	ERJ6GEYJ472V	4.7K 1/10W	[M]
R836	ERJ6GEYJ101V	100 1/10W	[M]
R837	ERJ6GEYJ472V	4.7K 1/10W	[M]
R838	ERJ6GEYJ103V	10K 1/10W	[M]
R839	ERJ6GEYJ102V	1K 1/10W	[M]
R840	ERJ6GEYJ474V	470K 1/10W	[M]
R841	ERJ6GEYJ102V	1K 1/10W	[M]
R842	ERJ6GEYJ102V	1K 1/10W	[M]
R846	ERJ6GEYJ102V	1K 1/10W	[M]
R847	ERJ6GEYJ223V	22K 1/10W	[M]
R848	ERJ6GEYJ153V	15K 1/10W	[M]
R849	ERJ6GEYJ101V	100 1/10W	[M]
R855	ERJ6GEYJ104V	100K 1/10W	[M]
R856	ERJ6GEYJ103V	10K 1/10W	[M]
R857	ERJ6GEYJ102V	1K 1/10W	[M]
R858	ERJ6GEYJ102V	1K 1/10W	[M]
R859	ERJ6GEYJ102V	1K 1/10W	[M]
R860	ERJ6GEYJ102V	1K 1/10W	[M]
R861	ERJ6GEYJ102V	1K 1/10W	[M]
R862	ERJ6GEYJ102V	1K 1/10W	[M]
R863	ERJ6GEYJ473V	47K 1/10W	[M]
R864	ERJ6GEYJ473V	47K 1/10W	[M]
R865	ERJ6GEYJ102V	1K 1/10W	[M]
R866	ERJ6GEYJ473V	47K 1/10W	[M]
R867	ERJ6GEYJ103V	10K 1/10W	[M]
R868	ERJ6GEYJ103V	10K 1/10W	[M]
R869	ERJ6GEYJ473V	47K 1/10W	[M]
R870	ERJ6GEYJ102V	1K 1/10W	[M]
R871	ERJ6GEYJ102V	1K 1/10W	[M]
R872	ERJ6GEYJ102V	1K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R873	ERJ6GEYJ102V	1K 1/10W	[M]
R874	ERJ6GEYJ102V	1K 1/10W	[M]
R875	ERJ6GEYJ102V	1K 1/10W	[M]
R876	ERJ6GEYJ473V	47K 1/10W	[M]
R877	ERJ6GEYJ473V	47K 1/10W	[M]
R878	ERJ6GEYJ102V	1K 1/10W	[M]
R879	ERJ6GEYJ102V	1K 1/10W	[M]
R880	ERJ6GEYJ102V	1K 1/10W	[M]
R881	ERJ6GEYJ224V	220K 1/10W	[M]
R882	ERJ6GEYJ472V	4.7K 1/10W	[M]
R883	ERJ6GEYJ103V	10K 1/10W	[M]
R884	ERJ6GEYJ103V	10K 1/10W	[M]
R885	ERJ6GEYJ102V	1K 1/10W	[M]
R886	ERJ6GEYJ101V	100 1/10W	[M]
R887	ERJ6GEYJ101V	100 1/10W	[M]
R888	ERJ6GEYJ103V	10K 1/10W	[M]
R889	ERJ6GEY0R00V	0 1/10W	[M]
R890	ERJ6GEYJ472V	4.7K 1/10W	[M]
R891	ERJ6GEYJ473V	47K 1/10W	[M]
R892	ERJ6GEYJ473V	47K 1/10W	[M]
R893	ERJ6GEYJ473V	47K 1/10W	[M]
R894	ERJ6GEYJ222V	2.2K 1/10W	[M]
R895	ERJ6GEYJ473V	47K 1/10W	[M]
R896	ERJ6GEYJ103V	10K 1/10W	[M]
R899	ERJ6GEYJ104V	100K 1/10W	[M]
R930	ERDS2TJ102T	1K 1/4W	[M]
R931	ERDS2TJ272T	2.7K 1/4W	[M]
R932	ERDS2TJ222T	2.2K 1/4W	[M]
R933	ERDS2TJ122T	1.2K 1/4W	[M]
R934	ERDS2TJ182T	1.8K 1/4W	[M]
R935	ERDS2TJ101T	100 1/4W	[M]
R936	ERDS2TJ102T	1K 1/4W	[M]
R940	ERDS2TJ101T	100 1/4W	[M]
R941	ERDS2TJ102T	1K 1/4W	[M]
R942	ERDS2TJ122T	1.2K 1/4W	[M]
R943	ERDS2TJ102T	1K 1/4W	[M]
R944	ERDS2TJ182T	1.8K 1/4W	[M]
R945	ERDS2TJ272T	2.7K 1/4W	[M]
R946	ERDS2TJ472T	4.7K 1/4W	[M]
R947	ERDS2TJ682T	6.8K 1/4W	[M]
R948	ERDS2TJ101T	100 1/4W	[M]
R949	ERDS2TJ103T	10K 1/4W	[M]
R950	ERDS2TJ472T	4.7K 1/4W	[M]
R951	ERDS2TJ272T	2.7K 1/4W	[M]
R952	ERDS2TJ472T	4.7K 1/4W	[M]
R953	ERDS2TJ472T	4.7K 1/4W	[M]
R954	ERDS2TJ472T	4.7K 1/4W	[M]
R955	ERDS2TJ103T	10K 1/4W	[M]
R956	ERDS2TJ103T	10K 1/4W	[M]
R957	ERDS2TJ103T	10K 1/4W	[M]
R958	ERDS2TJ103T	10K 1/4W	[M]
R960	ERDS2TJ271T	270 1/4W	[M]
R961	ERDS2TJ331T	330 1/4W	[M]
R962	ERDS2TJ331T	330 1/4W	[M]
R963	ERDS2TJ271T	270 1/4W	[M]
R964	ERDS2TJ682T	6.8K 1/4W	[M]
R966	ERDS2TJ222T	2.2K 1/4W	[M]
R971	ERDS2TJ332T	3.3K 1/4W	[M]
R972	ERDS2TJ101T	100 1/4W	[M]
R972	ERDS2TJ821T	820 1/4W	[M]
R973	ERDS2TJ331T	330 1/4W	[M]
R973	ERDS2TJ393T	39K 1/4W	[M]
R974	ERDS2TJ331T	330 1/4W	[M]
R975	ERDS2TJ331T	330 1/4W	[M]
R976	ERDS2TJ331T	330 1/4W	[M]
R977	ERDS2TJ331T	330 1/4W	[M]
R978	ERDS2TJ331T	330 1/4W	[M]
R980	ERDS2TJ102T	1K 1/4W	[M]
R981	ERDS2TJ821T	820 1/4W	[M]
R982	ERDS2TJ103T	10K 1/4W	[M]
R983	ERDS2TJ223T	22K 1/4W	[M]
R984	ERDS2TJ223T	22K 1/4W	[M]
R985	ERDS2TJ223T	22K 1/4W	[M]
R986	ERDS2TJ472T	4.7K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R987	ERDS2TJ333T	33K 1/4W	[M]
R989	ERDS2TJ472T	4.7K 1/4W	[M]
R990	ERDS2TJ472T	4.7K 1/4W	[M]
R991	ERDS2TJ104T	100K 1/4W	[M]
R992	ERDS2TJ104T	100K 1/4W	[M]
R993	ERDS2TJ472T	4.7K 1/4W	[M]
R995	ERDS2TJ101T	100 1/4W	[M]
R996	ERDS2TJ101T	100 1/4W	[M]
R1101	ERDS2TJ474T	470K 1/4W	[M]
R1102	ERDS2TJ153T	15K 1/4W	[M]
R1103	ERDS2TJ560T	56 1/4W	[M]
R1104	ERDS2TJ681T	680 1/4W	[M]
R1105	ERDS2TJ103T	10K 1/4W	[M]
R1107	ERDS2TJ334T	330K 1/4W	[M]
R1109	ERDS2TJ273T	27K 1/4W	[M]
R1110	ERDS2TJ222T	2.2K 1/4W	[M]
R1111	ERDS2TJ122T	1.2K 1/4W	[M]
R1112	ERDS2TJ470T	47 1/4W	[M]
R1113	ERDS2TJ392T	3.9K 1/4W	[M]
R1114	ERDS2TJ472T	4.7K 1/4W	[M]
R1115	ERDS2TJ474T	470K 1/4W	[M]
R1116	ERDS2TJ152T	1.5K 1/4W	[M]
R1201	ERDS2TJ474T	470K 1/4W	[M]
R1202	ERDS2TJ153T	15K 1/4W	[M]
R1203	ERDS2TJ560T	56 1/4W	[M]
R1204	ERDS2TJ681T	680 1/4W	[M]
R1205	ERDS2TJ103T	10K 1/4W	[M]
R1207	ERDS2TJ334T	330K 1/4W	[M]
R1209	ERDS2TJ273T	27K 1/4W	[M]
R1210	ERDS2TJ222T	2.2K 1/4W	[M]
R1211	ERDS2TJ122T	1.2K 1/4W	[M]
R1212	ERDS2TJ470T	47 1/4W	[M]
R1213	ERDS2TJ392T	3.9K 1/4W	[M]
R1214	ERDS2TJ472T	4.7K 1/4W	[M]
R1215	ERDS2TJ474T	470K 1/4W	[M]
R1216	ERDS2TJ152T	1.5K 1/4W	[M]
R1301	ERDS2TJ474T	470K 1/4W	[M]
R1302	ERDS2TJ104T	100K 1/4W	[M]
R1303	ERDS2TJ103T	10K 1/4W	[M]
R1304	ERDS2TJ152T	1.5K 1/4W	[M]
R1305	ERDS2TJ152T	1.5K 1/4W	[M]
R1307	ERDS2TJ153T	15K 1/4W	[M]
R1308	ERDS2TJ153T	15K 1/4W	[M]
R1309	ERDS2TJ331T	330 1/4W	[M]
R1310	ERDS2TJ103T	10K 1/4W	[M]
R1311	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1312	ERDS2TJ752T	7.5K 1/4W	[M]
R1313	ERDS2TJ472T	4.7K 1/4W	[M]
R1314	ERDS2TJ153T	15K 1/4W	[M]
R1315	ERDS2TJ472T	4.7K 1/4W	[M]
R1316	ERDS2TJ470T	47 1/4W	[M]
R1317	ERDS2TJ103T	10K 1/4W	[M]
R1318	ERDS2TJ682T	6.8K 1/4W	[M]
R1319	ERDS2TJ823T	82K 1/4W	[M]
R1320	ERDS2TJ103T	10K 1/4W	[M]
R1321	ERDS2TJ103T	10K 1/4W	[M]
R1322	ERDS2TJ102T	1K 1/4W	[M]
R1323	ERDS2TJ393T	39K 1/4W	[M]
R1324	ERDS2TJ822T	8.2K 1/4W	[M]
R1325	ERDS2TJ562T	5.6K 1/4W	[M]
R1326	ERDS2TJ682T	6.8K 1/4W	[M]
R1327	ERDS2TJ102T	1K 1/4W	[M]
R1328	ERDS2TJ101T	100 1/4W	[M]
R1329	ERDS2TJ335T	3.3M 1/4W	[M]
R1330	ERDS2TJ823T	82K 1/4W	[M]
R1331	ERDS2TJ104T	100K 1/4W	[M]
R1332	ERDS2TJ333T	33K 1/4W	[M]
R1333	ERDS2TJ472T	4.7K 1/4W	[M]
R1334	ERDS2TJ393T	39K 1/4W	[M]
R1335	ERDS2TJ682T	6.8K 1/4W	[M]
R1336	ERDS2TJ681T	680 1/4W	[M]
R1337	ERDS2TJ473T	47K 1/4W	[M]
R1338	ERDS2TJ102T	1K 1/4W	[M]
R1339	ERDS2TJ473T	47K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R1340	ERDS2TJ223T	22K 1/4W	[M]
R1342	ERDS2TJ123T	12K 1/4W	[M]
R1352	ERDS2TJ473T	47K 1/4W	[M]
R1354	ERDS2TJ332T	3.3K 1/4W	[M]
R1355	ERDS2TJ222T	2.2K 1/4W	[M]
R1391	ERDS2TJ223T	22K 1/4W	[M]
R1395	ERDS2TJ103T	10K 1/4W	[M]
R1396	ERDS2TJ102T	1K 1/4W	[M]
R1397	ERDS2TJ102T	1K 1/4W	[M]
R1398	ERDS2TJ103T	10K 1/4W	[M]
R1399	ERDS2TJ472T	4.7K 1/4W	[M]
		CAPACITORS	
C1	ECBT1H5R6KC5	5.6P 50V	[M]
C1	ECUV1H221KBV	220P 50V	[M]
C2	RCBS1H102KBY	1000P 50V	[M]
C3	ECBT1H2R2KC5	2.2P 50V	[M]
C4	ECBT1H181KB5	180P 50V	[M]
C4	ECUVNJ105ZFM	10 63V	[M]
C5	ECBT1H5R6KC5	5.6P 50V	[M]
C5	ECUVNA224KBV	0.22 10V	[M]
C6	ECBT1H3R3KC5	3.3P 50V	[M]
C6	ECUVNJ105ZFM	10 63V	[M]
C7	ECBT1H4R7KC5	4.7P 50V	[M]
C7	ECUVNA224KBV	0.22 10V	[M]
C8	ECBT1H3R3KC5	3.3P 50V	[M]
C8	ECUVNA224KBV	0.22 10V	[M]
C9	ECBT1H2R2KC5	2.2P 50V	[M]
C10	ECBT1H180JC5	18P 50V	[M]
C11	ECUV1C223KBV	0.022 16V	[M]
C11	RCBS1H102KBY	1000P 50V	[M]
C12	ECUVNJ474KBV	0.47 63V	[M]
C13	ECUVNC393KBV	0.039 16V	[M]
C14	ECUV1H102KBV	1000P 50V	[M]
C15	ECST0GY106RR	1M 4V	[M]
C16	ECUV1H181KCV	180P 50V	[M]
C17	ECUV1H332KBV	3300P 50V	[M]
C18	ECUV1H562KBV	5600P 50V	[M]
C20	ECUV1C475ZFM	47 16V	[M]
C21	ECUV1H822KBV	8200P 50V	[M]
C22	ECUV1H102KBV	1000P 50V	[M]
C24	ECUV1H102KBV	1000P 50V	[M]
C25	ECUVNC393KBV	0.039 16V	[M]
C26	ECUV1H472KBV	4700P 50V	[M]
C28	ECUV1A106ZFM	10 10V	[M]
C29	ECUV1H332KBV	3300P 50V	[M]
C30	ECUV1E123KBV	0.012 25V	[M]
C31	ECUV1H102KBV	1000P 50V	[M]
C32	ECUV1H102KBV	1000P 50V	[M]
C33	ECUV1C475ZFM	47 16V	[M]
C34	ECUV1H102KBV	1000P 50V	[M]
C35	ECUV1H102KBV	1000P 50V	[M]
C37	ECUV1H181KCV	180P 50V	[M]
C40	ECUVNC104ZFM	0.1 16V	[M]
C41	ECEV0JA331P	330 6.3V	[M]
C42	ECST0GY106RR	1M 4V	[M]
C45	ECUV1C475ZFM	47 16V	[M]
C47	ECUVNJ105ZFM	10 63V	[M]
C48	ECUVNC104ZFM	0.1 16V	[M]
C50	ECUVNC104ZFM	0.1 16V	[M]
C51	ECUVNJ105ZFM	10 63V	[M]
C52	ECUVNJ105ZFM	10 63V	[M]
C53	ECUV1H332KBV	3300P 50V	[M]
C55	ECUV1H102KBV	1000P 50V	[M]
C56	ECUV1H102KBV	1000P 50V	[M]
C57	ECUV1H102KBV	1000P 50V	[M]
C58	ECUV1H102KBV	1000P 50V	[M]
C59	ECUVNC823KBV	0.082 16V	[M]
C60	ECEV1CA100SR	10 16V	[M]
C61	ECUVNJ334KBV	0.33 63V	[M]
C62	ECUV1H221KBV	220P 50V	[M]
C64	ECUV1E153KBV	0.015 25V	[M]
C65	ECUVNC104KBV	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C66	ECUVNC823KBV	0.082 16V	[M]
C67	ECUV1H392KBV	3900P 50V	[M]
C70	ECUV1E123KBV	0.012 25V	[M]
C72	ECUVNC104ZFM	0.1 16V	[M]
C73	ECUVNC104ZFM	0.1 16V	[M]
C74	ECUVNC104ZFM	0.1 16V	[M]
C75	ECUVNC104ZFM	0.1 16V	[M]
C76	ECUVNC104ZFM	0.1 16V	[M]
C79	ECUVNC104ZFM	0.1 16V	[M]
C80	ECUVNC104ZFM	0.1 16V	[M]
C81	ECUV1H560JCV	56P 50V	[M]
C82	ECUV1C473KBV	0.047 16V	[M]
C83	ECUVNC104ZFM	0.1 16V	[M]
C84	ECUVNC104ZFM	0.1 16V	[M]
C85	ECUV1A106ZFM	10 10V	[M]
C87	ECUVNC104ZFM	0.1 16V	[M]
C88	ECUV1H331KBV	330P 50V	[M]
C89	ECUV1H331KBV	330P 50V	[M]
C90	ECUV1H080DCV	8P 50V	[M]
C91	ECUV1H080DCV	8P 50V	[M]
C94	ECUV1C475ZFM	47 16V	[M]
C96	ECUV1C475ZFM	47 16V	[M]
C97	ECUV1C475ZFM	47 16V	[M]
C98	ECUVNC104ZFM	0.1 16V	[M]
C99	ECUV1H102KBV	1000P 50V	[M]
C101	ECUV1A106ZFM	10 10V	[M]
C101	ECUV1H103KBN	0.01 50V	[M]
C102	ECA1CAK470XB	47 16V	[M]
C102	ECUVNC104ZFM	0.1 16V	[M]
C103	ECUV1A106ZFM	10 10V	[M]
C103	ECUV1H103KBN	0.01 50V	[M]
C104	ECUV1H102KBN	1000P 50V	[M]
C106	ECUV1H102KBV	1000P 50V	[M]
C106	ECUV1H103KBN	0.01 50V	[M]
C107	ECUV1E473ZFM	0.047 25V	[M]
C108	ECUV1H080DCN	8P 50V	[M]
C109	ECUV1H102KBN	1000P 50V	[M]
C110	ECUV1H103KBN	0.01 50V	[M]
C110	ECUVNC104ZFM	0.1 16V	[M]
C111	ECEA1EKA4R7B	4.7 25V	[M]
C111	ECUV1C475ZFM	47 16V	[M]
C112	ECEV1CA100SR	10 16V	[M]
C112	ECUV1H103KBN	0.01 50V	[M]
C113	ECUV1H102KBN	1000P 50V	[M]
C114	ECEA1HKA3R3B	3.3 50V	[M]
C114	ECUV1H561KBV	560P 50V	[M]
C115	ECEA1EKA4R7B	4.7 25V	[M]
C115	ECUV1H561KBV	560P 50V	[M]
C116	ECUV1H333KBN	0.033 50V	[M]
C117	ECEV0JA331P	330 6.3V	[M]
C117	ECUV1H103KBN	0.01 50V	[M]
C118	ECUV1H103KBN	0.01 50V	[M]
C118	ECUVNA105KBN	10 10V	[M]
C119	ECQP2A681JZT	680P 100V	[M]
C119	ECUV1H102KBV	1000P 50V	[M]
C120	ECEA1CKA100B	10 16V	[M]
C120	ECUV1H560JCV	56P 50V	[M]
C121	ECEA1HKA47B	0.47 50V	[M]
C121	ECUV1H102KBV	1000P 50V	[M]
C122	ECEA1HKA010B	1 50V	[M]
C122	ECUVNJ105ZFM	10 63V	[M]
C123	ECEA1HKA010B	1 50V	[M]
C123	ECUVNC104ZFM	0.1 16V	[M]
C124	ECUV1H101KCN	100P 50V	[M]
C125	ECEA1CKA220B	22 16V	[M]
C126	ECUVNC105ZFM	10 16V	[M]
C127	ECEA1CKA220B	22 16V	[M]
C128	ECUVNC104ZFM	0.1 16V	[M]
C129	ECEA0JKA101B	100 6.3V	[M]
C129	ECUV1H101JCV	100P 50V	[M]
C130	ECEA0JKA101B	100 6.3V	[M]
C131	ECUV1H151KCN	150P 50V	[M]
C132	ECUV1H102KBN	1000P 50V	[M]
C133	ECUV1H270JCN	27P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C133	ECUVNJ1052FV	10 63V	[M]
C134	ECUV1H270JCN	27P 50V	[M]
C134	ECUV1H331KBV	330P 50V	[M]
C136	ECUV1H102KBN	1000P 50V	[M]
C137	ECUV1H332KBN	3300P 50V	[M]
C138	ECFV0JA470SR	47 6.3V	[M]
C138	ECUV1H103KBN	0.01 50V	[M]
C139	ECBA1EKA4R7B	4.7 25V	[M]
C139	ECUVNC104ZFB	0.1 16V	[M]
C140	ECUVNC104ZFB	0.1 16V	[M]
C141	ECA1HAK010XB	1 50V	[M]
C141	ECUVNC104ZFB	0.1 16V	[M]
C142	ECA1HAK010XB	1 50V	[M]
C142	ECUVNC104ZFB	0.1 16V	[M]
C143	ECUV1C475ZFM	47 16V	[M]
C143	ECUV1H103KBN	0.01 50V	[M]
C144	ECUV1E103KBV	0.01 25V	[M]
C144	ECUV1H103KBN	0.01 50V	[M]
C147	ECUV1E103KBV	0.01 25V	[M]
C147	ECUV1H102KBN	1000P 50V	[M]
C148	ECUV1E103KBV	0.01 25V	[M]
C148	ECUV1H103KBN	0.01 50V	[M]
C149	ECUV1E103KBV	0.01 25V	[M]
C149	ECUV1E104ZFB	0.1 25V	[M]
C154	ECUV1H330JCV	33P 50V	[M]
C155	ECUV1H330JCV	33P 50V	[M]
C401	ECUV1H101KCN	100P 50V	[M]
C402	ECUV1H101KCN	100P 50V	[M]
C403	ECUV1H101JCV	100P 50V	[M]
C404	ECUV1H101JCV	100P 50V	[M]
C407	ECFR1C153KR	0.015 16V	[M]
C408	ECFR1C153KR	0.015 16V	[M]
C409	ECA1HAK4R7XB	4.7 50V	[M]
C410	ECA1HAK4R7XB	4.7 50V	[M]
C411	ECUV1H221KBV	220P 50V	[M]
C412	ECUV1H221KBV	220P 50V	[M]
C413	ECFR1C153KR	0.015 16V	[M]
C414	ECFR1C153KR	0.015 16V	[M]
C415	ECA1CAK100XB	10 16V	[M]
C416	ECA1CAK100XB	10 16V	[M]
C417	ECQV1H184JZ3	0.18 50V	[M]
C418	ECQV1H184JZ3	0.18 50V	[M]
C419	ECQV1H184JZ3	0.18 50V	[M]
C420	ECQV1H184JZ3	0.18 50V	[M]
C421	ECUV1H221KBV	220P 50V	[M]
C422	ECUV1H221KBV	220P 50V	[M]
C423	ECUV1H682KBV	6800P 50V	[M]
C424	ECUV1H682KBV	6800P 50V	[M]
C425	ECUV1H102KBN	1000P 50V	[M]
C426	ECUV1H102KBN	1000P 50V	[M]
C428	ECA1AAK470XB	47 10V	[M]
C429	ECA1CAK101XB	100 16V	[M]
C430	ECA1CAK101XB	100 16V	[M]
C431	ECA1HAK2R2XB	2.2 50V	[M]
C432	ECA1HAK2R2XB	2.2 50V	[M]
C433	ECUV1H470JCN	47P 50V	[M]
C434	ECUV1H470JCN	47P 50V	[M]
C435	ECUV1H222KBN	2200P 50V	[M]
C436	ECUV1H222KBN	2200P 50V	[M]
C437	ECA1CAK100XB	10 16V	[M]
C438	ECA1CAK100XB	10 16V	[M]
C440	ECA1HAKR47XB	0.47 50V	[M]
C441	ECA1HAKR47XB	0.47 50V	[M]
C442	ECQV1H154JZ3	0.15 50V	[M]
C443	ECUV1H471JCV	470P 50V	[M]
C444	ECFR1C473KR	0.047 16V	[M]
C445	ECA1CAK100XB	10 16V	[M]
C446	ECA1CAK100XB	10 16V	[M]
C447	ECQV1H154JZ3	0.15 50V	[M]
C448	ECQV1H154JZ3	0.15 50V	[M]
C449	ECQV1H154JZ3	0.15 50V	[M]
C450	ECQV1H154JZ3	0.15 50V	[M]
C451	ECUV1H471JCV	470P 50V	[M]
C452	ECUV1H471JCV	470P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C454	ECA1HAK3R3XB	3.3 50V	[M]
C455	ECUV1H152KBV	1500P 50V	[M]
C456	ECUV1H152KBV	1500P 50V	[M]
C457	ECA1HAK010XB	1 50V	[M]
C459	ECQV1H104JZ3	0.1 50V	[M]
C460	ECQV1H104JZ3	0.1 50V	[M]
C461	ECA1CAK100XB	10 16V	[M]
C462	ECA1CAK100XB	10 16V	[M]
C463	ECA1CAK100XB	10 16V	[M]
C464	ECA1CAK100XB	10 16V	[M]
C465	ECUV1E183KBV	0.018 25V	[M]
C466	ECUV1E183KBV	0.018 25V	[M]
C467	ECFR1C333KR	0.033 16V	[M]
C468	ECFR1C333KR	0.033 16V	[M]
C501	ECQV1H224JZ3	0.22 50V	[M]
C502	ECQV1H224JZ3	0.22 50V	[M]
C503	ECQV1H224JZ3	0.22 50V	[M]
C504	ECQV1H224JZ3	0.22 50V	[M]
C505	ECBT1H471KB5	470P 50V	[M]
C506	ECBT1H471KB5	470P 50V	[M]
C509	ECA1EAK100XB	10 25V	[M]
C510	ECA1EAK100XB	10 25V	[M]
C511	ECBT1H102KB5	1000P 50V	[M]
C512	ECBT1H102KB5	1000P 50V	[M]
C513	ECA1CAK101XB	100 16V	[M]
C514	ECA1CAK101XB	100 16V	[M]
C515	ECA1CAM471XB	470 16V	[M]
C516	ECA1CAM471XB	470 16V	[M]
C519	ECQV1H224JZ3	0.22 50V	[M]
C520	ECQV1H224JZ3	0.22 50V	[M]
C527	ECBT1H104ZF5	0.1 50V	[M]
C535	ECA1EAK100XB	10 25V	[M]
C539	ECA1CAK220B	22 16V	[M]
C541	ECA1EAK100XB	10 25V	[M]
C542	ECA1CAK101XB	100 16V	[M]
C544	ECQV1H334JZ3	0.33 50V	[M]
C546	ECA1EAM331XB	330 25V	[M]
C547	ECA1CAK101XB	100 16V	[M]
C550	ECBT1H221KB5	220P 50V	[M]
C555	ECA1HAK010XB	1 50V	[M]
C557	ECA1EAK330XB	33 25V	[M]
C589	ECBT1H473ZF5	0.047 50V	[M]
C590	ECBT1H473ZF5	0.047 50V	[M]
C591	ECA1AKA221Q	220 10V	[M]
C592	ECA1AKA221Q	220 10V	[M]
C603	ECA1HM470B	47 50V	[M]
C604	ECBT1H103KB5	0.01 50V	[M]
C605	ECA1HAK4R7XB	4.7 50V	[M]
C607	ECA1CAM102XB	1000 16V	[M] △
C610	ECKR1H103ZF5	0.01 50V	[M]
C611	ECKR1H103ZF5	0.01 50V	[M] △
C612	ECKR1H103ZF5	0.01 50V	[M]
C613	ECA0JKA220B	22 6.3V	[M]
C615	ECA1HAK4R7XB	4.7 50V	[M]
C616	ECA1HAK4R7XB	4.7 50V	[M]
C617	ECA1HAK010XB	1 50V	[M]
C618	ECA1HAK4R7XB	4.7 50V	[M]
C619	ECA1HAK010XB	1 50V	[M]
C620	ECBT1H104KB5	0.1 50V	[M]
C621	ECA1HAK010XB	1 50V	[M]
C622	ECA1CAK101XB	100 16V	[M]
C623	ECBT1C103MS5	0.01 16V	[M]
C624	ECA1VM221B	220 35V	[M] △
C625	ECKR1H223ZF5	0.022 50V	[M]
C626	ECQE2104KF3	0.1 250V	[M]
C627	ECBT1H103ZF5	0.01 50V	[M]
C628	ECA1EAK100XB	10 25V	[M]
C629	ECBT1H103ZF5	0.01 50V	[M]
C630	ECBT1E103ZF5	0.01 25V	[M]
C631	ECBT1E103ZF5	0.01 25V	[M]
C632	ECBT1H103ZF5	0.01 50V	[M]
C633	ECBT1H103ZF5	0.01 50V	[M]
C634	ECA1EAK100XB	10 25V	[M]
C635	ECA1EAM682XE	6800 25V	[M] △

Ref. No.	Part No.	Part Name & Description	Remarks
C636	ECA1EAK100XB	10 25V	[M]
C637	ECA1EM222E	2200 25V	[M] △
C639	ECBT1H103KB5	0.01 50V	[M]
C701	ECRA0JKA330I	33 6.3V	[M]
C701	ECUV1H102KBN	1000P 50V	[M]
C702	ECUV1E104MBN	0.1 25V	[M]
C703	ECRA0JKA101I	100 6.3V	[M]
C704	ECUV1E104MBN	0.1 25V	[M]
C706	ECUV1H272KBN	2700P 50V	[M]
C707	ECUV1E273KBN	0.027 25V	[M]
C709	ECUV1H221KBV	220P 50V	[M]
C710	ECUV1H121JCN	120P 50V	[M]
C711	ECUV1E104KBN	0.1 25V	[M]
C711	ECUV1H221KBV	220P 50V	[M]
C712	ECUV1E104KBN	0.1 25V	[M]
C713	ECUV1E104MBN	0.1 25V	[M]
C714	ECRA0JKA101I	100 6.3V	[M]
C715	ECUV1H272KBN	2700P 50V	[M]
C716	ECUV1H821KBN	820P 50V	[M]
C717	ECUV1E104ZFN	0.1 25V	[M]
C718	ECUV1C224KBN	0.22 16V	[M]
C723	ECRA1AKA221I	220 10V	[M]
C724	ECUV1E104MBN	0.1 25V	[M]
C725	ECUV1H102KBN	1000P 50V	[M]
C726	ECUV1H102KBN	1000P 50V	[M]
C727	ECA1HAK010XI	1 50V	[M]
C728	ECA1HAK010XI	1 50V	[M]
C730	ECUV1E104ZFN	0.1 25V	[M]
C731	ECA0JAK221XI	220 6.3V	[M]
C732	ECRA0JKA221I	220 6.3V	[M]
C733	ECUV1E104MBN	0.1 25V	[M]
C734	ECRA1AKA221I	220 10V	[M]
C735	ECUV1E104ZFN	0.1 25V	[M]
C736	ECUV1E104ZFN	0.1 25V	[M]
C737	ECUV1E104ZFN	0.1 25V	[M]
C738	ECUV1H563KBN	0.056 50V	[M]
C739	ECUV1H222KBN	2200P 50V	[M]
C742	ECUV1E273KBN	0.027 25V	[M]
C743	ECUV1E104ZFN	0.1 25V	[M]
C744	ECUV1E822KBN	8200P 25V	[M]
C745	ECUV1E104ZFN	0.1 25V	[M]
C747	ECUV1H181JCN	180P 50V	[M]
C749	ECUV1H222KBN	2200P 50V	[M]
C750	ECUV1E104MBN	0.1 25V	[M]
C751	ECUV1E104MBN	0.1 25V	[M]
C751	ECUV1H680JCV	68P 50V	[M]
C752	ECUV1H152KBN	1500P 50V	[M]
C753	ECUV1H471KBN	470P 50V	[M]
C754	ECUV1H471KBN	470P 50V	[M]
C757	ECA1HAK2R2XB	2.2 50V	[M]
C758	ECA1HAK2R2XB	2.2 50V	[M]
C760	ECUV1C104KBV	0.1 16V	[M]
C760	ECUV1E104MBN	0.1 25V	[M]
C801	ECUV1H180JCN	18P 50V	[M]
C802	ECUV1H180JCN	18P 50V	[M]
C803	ECUV1H680JCN	68P 50V	[M]
C804	ECUV1H680JCN	68P 50V	[M]
C806	ECUV1H560JCV	56P 50V	[M]
C808	ECUV1H560JCV	56P 50V	[M]
C809	ECRA0JKA101B	100 6.3V	[M]
C810	ECUV1H102KBN	1000P 50V	[M]
C811	ECA0JM102B	1000P 6.3V	[M]
C812	ECUV1H102KBN	1000P 50V	[M]
C813	ECUV1H101KCN	100P 50V	[M]
C814	ECUV1H103KBN	0.01 50V	[M]
C815	ECUV1H101KCN	100P 50V	[M]
C816	ECRA1HKA010B	1 50V	[M]
C817	ECRA1HKA010B	1 50V	[M]
C818	ECUV1H101KCN	100P 50V	[M]
C819	ECUV1H103KBN	0.01 50V	[M]
C820	ECRA1CKA100B	10 16V	[M]
C821	ECUV1H101KCN	100P 50V	[M]
C822	ECUV1H101KCN	100P 50V	[M]
C823	ECUV1H101KCN	100P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C824	ECUV1H101KCN	100P 50V	[M]
C825	ECUV1H101KCN	100P 50V	[M]
C826	ECRA1AKA220B	22 10V	[M]
C827	ECUV1H103KBN	0.01 50V	[M]
C828	ECUV1H102KBN	1000P 50V	[M]
C829	ECUV1H101KCN	100P 50V	[M]
C831	ECUV1H101KCN	100P 50V	[M]
C832	ECUV1H101KCN	100P 50V	[M]
C833	ECUV1H101KCN	100P 50V	[M]
C834	ECUV1H102KBN	1000P 50V	[M]
C910	ECBT1H102KB5	1000P 50V	[M]
C911	ECBT1H102KB5	1000P 50V	[M]
C912	ECBT1H102KB5	1000P 50V	[M]
C913	ECBT1H102KB5	1000P 50V	[M]
C914	ECBT1H102KB5	1000P 50V	[M]
C915	ECBT1H102KB5	1000P 50V	[M]
C921	ECBT1H104ZF5	0.1 50V	[M]
C922	ECBT1H101KB5	100P 50V	[M]
C923	ECBT1H561KB5	560P 50V	[M]
C924	ECRA1HKA010B	1 50V	[M]
C925	ECRA1HKA010B	1 50V	[M]
C926	ECRA1AKA220B	22 10V	[M]
C927	ECBT1H102KB5	1000P 50V	[M]
C928	ECRA0JKA101B	100 6.3V	[M]
C933	ECBT1H101KB5	100P 50V	[M]
C934	ECBT1H101KB5	100P 50V	[M]
C941	ECBT1H101KB5	100P 50V	[M]
C942	ECBT1H101KB5	100P 50V	[M]
C954	ECBT1H101KB5	100P 50V	[M]
C956	ECBT1H101KB5	100P 50V	[M]
C958	ECRA0JKA470B	47 6.3V	[M]
C1102	ECBT1C152MR5	1500P 16V	[M]
C1103	ECRA0JKA470B	47 6.3V	[M]
C1104	ECBT1H331KB5	330P 50V	[M]
C1105	ECFR1C153KR	0.015 16V	[M]
C1106	ECA1HAK4R7XB	4.7 50V	[M]
C1107	ECA1HAK010XB	1 50V	[M]
C1108	ECRA0JKA470B	47 6.3V	[M]
C1111	ECA1HAK4R7XB	4.7 50V	[M]
C1112	ECBT1H102KB5	1000P 50V	[M]
C1113	ECBT1H102KB5	1000P 50V	[M]
C1114	ECBT1H102KB5	1000P 50V	[M]
C1115	ECBT1H101KB5	100P 50V	[M]
C1116	ECBT1C682KR5	6800P 16V	[M]
C1202	ECBT1C152MR5	1500P 16V	[M]
C1203	ECRA0JKA470B	47 6.3V	[M]
C1204	ECBT1H331KB5	330P 50V	[M]
C1205	ECFR1C153KR	0.015 16V	[M]
C1206	ECA1HAK4R7XB	4.7 50V	[M]
C1207	ECA1HAK010XB	1 50V	[M]
C1208	ECRA0JKA470B	47 6.3V	[M]
C1211	ECA1HAK4R7XB	4.7 50V	[M]
C1212	ECBT1H102KB5	1000P 50V	[M]
C1213	ECBT1H102KB5	1000P 50V	[M]
C1214	ECBT1H102KB5	1000P 50V	[M]
C1215	ECBT1H101KB5	100P 50V	[M]
C1216	ECBT1C682KR5	6800P 16V	[M]
C1301	ECRA1HN010SB	1 50V	[M]
C1303	ECBT1C103MS5	0.01 16V	[M]
C1305	ECQP1102JZT	1000P 100V	[M]
C1306	ECQP1472JZT	4700P 100V	[M]
C1307	ECA1HAK010XB	1 50V	[M]
C1308	ECA1CM101B	100 16V	[M]
C1309	ECQV1H473JZ3	0.047 50V	[M]
C1310	ECBT1H102KB5	1000P 50V	[M]
C1311	ECBT1H102KB5	1000P 50V	[M]
C1312	ECBT1C222MR5	2200P 16V	[M]
C1313	ECBT1C222MR5	2200P 16V	[M]
C1314	ECBT1C332MR5	3300P 16V	[M]
C1315	ECA1HM470B	47 50V	[M]
C1316	ECFR1C104KR	0.1 16V	[M]
C1317	ECBT1H470J5	47P 50V	[M]
C1318	ECA1HAK3R3XB	3.3 50V	[M]
C1319	ECRA1AKA221Q	220 10V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1320	ECEA1CKA220B	22 16V	[M]
C1321	ECEA1CKA220B	22 16V	[M]
C1322	ECEA0JKA470B	47 6.3V	[M]
C1323	ECBT1C103MS5	0.01 16V	[M]
C1324	ECBT1C472MR5	4700P 16V	[M]
C1326	ECA1EAK100XB	10 25V	[M]
		CHIP JUMPER	
RJ701	ERJ6GEY0R00V	0 1/10W	[M]
RJ702	ERJ8GEY0R00V	0 1/8W	[M]
RJ709	ERJ8GEY0R00V	0 1/8W	[M]
RJ712	ERJ8GEY0R00V	0 1/8W	[M]
RJ721	ERJ6GEY0R00V	0 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
RJ722	ERJ6GEY0R00V	0 1/10W	[M]
RJ723	ERJ6GEY0R00V	0 1/10W	[M]
RJ724	ERJ6GEY0R00V	0 1/10W	[M]
RJ726	ERJ6GEY0R00V	0 1/10W	[M]
RJ727	ERJ6GEY0R00V	0 1/10W	[M]
RJ728	ERJ6GEY0R00V	0 1/10W	[M]
RJ729	ERJ6GEY0R00V	0 1/10W	[M]
RJ731	ERJ6GEY0R00V	0 1/10W	[M]
RJ732	ERJ6GEY0R00V	0 1/10W	[M]
RJ734	ERJ6GEY0R00V	0 1/10W	[M]
		TEST JUMPER	
TJ701	EYF8CU	TEST JUMPER	[M]

17.6. Packaging Materials & Accessories Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGX0692	PACKING CASE	[M]
P2	RPNX0120	POLYFOAM	[M]
P3	RPHV0001	MIRAMAT SHEET	[M]
		ACCESSORIES	

Ref. No.	Part No.	Part Name & Description	Remarks
A1	RAK-SC971WK	REMOTE CONTROL	[M]
A1-1	RXQX0008-W	R/C BATTERY COVER	[M]
A2	RJA0019-2K	AC CORD (SF)	[M] △
A3	RQT5600-B	O/I BOOK (EN)	[M]
A3	RQT5601-K	O/I BOOK (CH)	[M]
A4	RSA0006-J	FM ANTENNA WIRE	[M]
A5	RSA0033A	AM LOOP ANT	[M]
A6	RJPLSG04-H	AC CORD ADAPTOR	[M]

17.7. Packaging

